

Information Sheet – Research using laboratory animals

Purpose

This Information sheet should clarify the responsibilities for [hazard management](#) and the [provision of information, instruction and training](#) when performing research using laboratory animals across the University. It provides specific advice to local areas on the options and arrangements available to supervisors for the provision of information, instruction and training to staff and students, depending on the level of risk. For additional advice or support, please contact your [Faculty/School/Branch HSW team](#).

Q1 What factors need to be considered when conducting research using laboratory animals?

Workers should be aware that the use of animals for scientific research, teaching, training, testing, or experimentation is regulated by State legislation - [The Animal Welfare Act 1985 \(SA\)](#) and the [Australian code for the care and use of animals for scientific purposes 8th edition 2013](#).

Workers **will** need to receive information, instruction and training – depending on the tasks and/or activities they need to undertake in the research laboratory. Refer to Q3 (Table 1 for guidance) What information, instruction and training is required for workers conducting research using laboratory animals?

It's important to note that supervisors of workers conducting research using animals, are responsible for:

- performing hazard identification and a risk assessment (RA) that is specific to the tasks and activities they are undertaking (this includes developing tasks specific Safe Operating Procedures (SOPs) if used as a control);
- determining if a proficiency is required to undertake the task/activity safely;
- determining the level of supervision required for workers whilst becoming proficient; and
- determining when a proficiency has been attained.

For a definition of who is a supervisor please consult the HSW Handbook chapter on [HSW Information, instruction and training](#).

Q2 What hazards can exist when conducting research using laboratory animals?

Hazards associated with using and handling laboratory animals may arise from a variety of sources, including viruses, bacteria, fungi, parasites, ionising and non-ionising radiation, hazardous substances, toxins, carcinogens, allergens, recombinant DNA techniques, anaesthetic gases and physical injuries. Some of the hazards may be controlled by the animal facility's certification requirements i.e. PC1 or PC2 Laboratories.

However, the hazard management for tasks undertaken in the laboratory or animal facility and the determination of proficiency required to perform those tasks, is the responsibility of the **supervisor**. Supervisors should identify if any of the following hazards may apply.

1. **Physical injuries** – A number of tasks in laboratories or animal facilities require moderate to heavy physical labour, and performing these tasks may expose workers to risks including those from moving heavy equipment (strains), slippery floors, hot surfaces-autoclaved equipment. Working with laboratory rodents has an associated risk of rodent bites and scratches. This also applies to other animals prone to biting and/or scratching. Working with larger animals (sheep, cows, horses etc) carries a much higher risk of injury due to the strength of the animal. Wherever possible engineering controls should be used.
2. **Infection** - To minimize the risks associated with infections arising from any penetrating wounds such as animal bites or needle sticks, all persons working with laboratory animals and/or in laboratory animal facilities or should maintain their tetanus vaccination status. This will require that the area, or School/Branch, collect and monitor records on each workers vaccination status. Each animal species harbours microorganisms, therefore each species should be evaluated for zoonotic disease risk.

Continued

HSW Handbook	Hazard Management – Research using laboratory animals	Effective Date:	16 November 2020	Version 1.1
Authorised by	Director, HSW	Review Date:	7 May 2021	Page 1 of 4
Warning	This process is uncontrolled when printed. The current version of this document is available on the HSW Website.			

Q2 What hazards can exist when conducting research using laboratory animals? Continued

3. **Allergies** – factors affecting animal allergen levels in a laboratory or animal room include animal species, ventilation, bedding, hygiene practices and tasks performed.
4. **Chemical safety** – Research with animals involves various chemicals such as detergents, disinfectants, anaesthetics, tissue preservatives, research compounds, animal analgesics, antibiotics, radiosotopies, tranquilisers and humane killing agents.
5. **Venomous or toxic animals** – Research sometimes involves working with venomous (e.g. poisonous snakes, spiders) or toxic (e.g. cane toads) animals. These animals introduce further specific hazards that must be considered.

Note: PPE and Safe Operating Procedures will reduce but not eliminate chemical, allergen and infection risks. This is about control measures.

Q3 What information, instruction and training is required for workers conducting research using laboratory animals?

The supervisor must identify the level of information, instruction and training required, based on the nature of the risk involved when working with laboratory animals. Refer to the HSW Handbook chapter [HSW Training Plan](#) (Appendix A) Levels of HSW information, instruction and training and records management and Table 1 below.

For example, in laboratories:

- Level 3 training and licencing is required if working with radiation;
- Level 2 instruction and demonstrated proficiency may be required, which enables the operator to complete a high risk activity safely and without supervision (e.g. working with hazardous chemicals);
- Level 1 information is required to ensure general safety and compliance with Animal Ethics and Office of the Gene Technology Regulator (OGTR) requirements.

Records for Level 2 proficiencies and Level 3 training must appear on a Schools [Training Plan](#) or equivalent.

Table 1: Research Using Laboratory Animals - Information, instruction and training

Training	Who undertakes training	Provider/s	About the training
Level 1 information			
Animal Ethics Training	All Students and Staff working with Animals	Animal Welfare Officer (AWO), Research Services Office for Research Ethics and Compliance (ORECI)	This course is to draw attention to ethical questions that must be considered when scientific and teaching activities relating to the conditional use of animals are proposed. There is particular emphasis on the responsibilities involved and on the importance of compliance with the Australian Code for the Care and Use of Animals for Scientific Purposes - 8th Edition 2013
OGTR requirements training	All persons working in an OGTR certified facility	LAS & ORECI	All personnel (staff, students, visitors) must be trained in the OGTR requirements of the Physical Containment Facility Guidelines, irrespective of whether they are working with Genetically modified organism (GMOs).

Q3 What information, instruction and training is required for workers conducting research using laboratory animals? Continued

Table 1: Research Using Laboratory Animals - Information, instruction and training (Continued)

Training	Who undertakes training	Provider/s	About the training
Level 1 information (Continued)			
Laboratory Animal Services (LAS) Induction	All users of Laboratory Animal Services facilities	LAS	This training program is to provide animal users with the necessary information that will enable them to use the Laboratory Animal Services (LAS) efficiently, productively and ethically, by having the highest regard for the policies and procedures in place to ensure animal well-being and experimental integrity and reliability.
Level 2 instruction			
Laboratory Task Hazard Management	Staff and students undertaking animal related tasks	Laboratory Supervisor	In order to comply with University HSW Handbook Chapters on Hazard Management and Information, Instruction and Training, the supervisor of the task should <ul style="list-style-type: none"> • Perform hazard identification and risk assessment that is specific to the tasks and activities they undertake in their laboratory • Determine the level of supervision required while becoming competent in a proficiency • Determine when a proficiency has been attained
Introductory Mouse Handling, Injection and Blood Collection Techniques Introductory Rat Handling, Injection and Blood Collection Techniques	Staff and students undertaking animal related tasks; identified on RA or by the Supervisor	LAS and AWO (If required by the Supervisor)	These sessions are intended as an introduction to commonly used laboratory animal procedures and techniques for new students and less experienced staff. They will be conducted by the Animal Welfare Officer and Laboratory Animal Services. Proficiencies obtained by participants <ul style="list-style-type: none"> • Catching, holding and weighing of laboratory rodents • Injection techniques used with laboratory rodents • Blood collection techniques used with laboratory rodents • Additional task specific 1 on 1 training can be provided when requested by project supervisor.
Introductory Rodent Anaesthesia and Surgical Techniques	Staff and students undertaking animal related tasks; as identified on RA or by the Supervisor	LAS & AWO (If required by the Supervisor)	This course is conducted as two separate sessions (one session for Rodent Anaesthesia, and one session for Aseptic Surgery principles & practice) Proficiencies obtained by participants <ul style="list-style-type: none"> • Anaesthesia of laboratory rodents using injection and inhalation techniques • Principles of anaesthesia • Skin incision and suturing skills • Aseptic surgery principles & practice

Q3 What information, instruction and training is required for workers conducting research using laboratory animals? Continued

Table 1: Research Using Laboratory Animals - Information, instruction and training (Continued)

Training	Who undertakes training	Provider/s	About the training
Level 2 instruction (Continued)			
Introductory rodent euthanasia	Staff and students undertaking animal related tasks; as identified on RA or by the Supervisor	LAS & AWO (If required by the Supervisor)	These sessions are intended as an introduction to commonly used laboratory animal procedures and techniques for new students and less experienced staff. Proficiencies obtained by participants <ul style="list-style-type: none"> • Humane killing of laboratory rodents using injection, inhalation and physical techniques • Confirmation of death
Other task specific proficiencies required not covered by basic introductory courses	Staff and students undertaking animal related tasks as identified on RA or by the Supervisor	LAS and AWO	Session can be arranged with LAS and AWO as required. Proficiencies against an SOP(s) must be performed by the local Supervisor.
Level 3 Training			
Use of Radiation	All radiation users	University Radiation Officer	Ensure that Human Resources is consulted and the relevant legislation is complied with before any work listed on the Prescribed List (Appendix A) - Radiation Safety Management HSW Handbook chapter, is undertaken for the first time.

Q4 Who is responsible for ensuring workers conducting research using laboratory animals receive information instruction and training?

In accordance with the [Provision of information, instruction and training HSW Handbook](#) chapter, it is the supervisor’s responsibility to determine what information, instruction or training is required. The Head of School/Branch should take steps to ensure supervisors are providing adequate information, instruction and training to their staff and students in order to keep them safe in the workplace using, for example, workplace monitoring. This might be done through visiting facilities to review how animal handling safety is being managed or seeking to have the activities included on the Safety Review component of [Workplace Monitoring HSW Handbook](#) chapter.

Q5 When should I review the effectiveness of my hazard management and information, instruction and training where the School/Branch conducts research using laboratory animals?

A supervisor (or the facility manager where the activity takes place in a centrally managed facility) should AT ALL TIMES ensure compliance with laboratory rules, facility guidelines and Safe Operating Procedures. Workers should be ordered to cease work where ever unsafe behaviour is observed.

Should an incident or near miss occur, the incident should be reported to allow the [local HSW Team](#) to review the incident or near miss and where appropriate investigate to identify any failures and improvements that will prevent a recurrence.

Where an investigation finds that information, instruction and training was not sufficient to prevent injury, changes should be made with greater supervision until there is greater confidence in their effectiveness. The RA and SOP should be updated to reflect any corrective actions.

Q6 Where do I obtain further information on requirements if conducting research using laboratory animals?

If you require further information, please contact a member of the local [HSW Team](#).

HSW Handbook	Hazard Management – Research using laboratory animals	Effective Date:	16 November 2020	Version 1.1
Authorised by	Director, HSW	Review Date:	7 May 2021	Page 4 of 4
Warning	This process is uncontrolled when printed. The current version of this document is available on the HSW Website.			