This document has been developed by The Australian National University (ANU) Research Ethics Office. It has been endorsed by the ANU Animal Ethics Committee (AEC). It is designed to provide guidance regarding current best practice to institutional animal users and carers on the training and assessment requirements for the care and use of animals for scientific purposes. It has been prepared in consultation with the Australian Code for the Care and Use of Animals for Scientific Purposes 8th edition 2013.

AEC Approved Document_015_ANU Animal Training and Competency Framework V2.1

Background

ANU recognises the need for the use of animals for research and teaching. The Australian Code for the Care and Use of Animals for Scientific Purposes 8th edition (2013) (the Code) encompasses all aspects of the care and use of animals for teaching and research purposes and includes specific responsibilities in relation to competency.

Section 2.1.5 (v) (a) requires that AEC approved guidelines must include how the competence of people involved in the care and use of animals will be assessed and ensured.

Section 1.29 requires that people who care for and use animals must ensure that procedures are performed competently, and

1. be competent for the procedure they perform, or
2. be under the direct supervision of a person who is competent to perform the procedure.

Section 2.1.8 (ii) requires that Institutions provide adequate resources for appropriate education, training, and assessment of competence of investigators, and certification of such competence to the satisfaction of the AEC

General Information and Considerations

General Principles

Training of individuals should go beyond the basic 'how to' steps of a procedure, and should include why a procedure is being undertaken, how to prepare for the procedure, the equipment required, and what the relevant risks may be to humans and the animals. Written procedures and risk assessments should be provided prior to commencement of training. Training objectives should be clear, and requirements for competency outlined prior to the training and/or assessment.

ANU supports competency-based assessment which covers both the theoretical knowledge of the procedure and the practical approach to skills, including how to monitor animals for complications and how to respond in these circumstances.

ANU investigators and animal care staff that have prior training from another institution must complete a competency assessment against ANU standards. They may be able to

demonstrate advanced skills that allows them to progress through advanced training more rapidly than those who have had no previous training.

Where external investigators are not in a position to undertake training and assessment through ANU, a Statement of Competency signed by an external institution must be provided.

Training will only be undertaken for procedures that have been approved on an animal ethics protocol. For training in techniques that have high welfare impacts, Primary Investigators (PIs) must consider the feasibility and alternative options. The University Veterinarians should be consulted in the design of the procedures and training of such techniques.

The higher the risk of a procedure (defined by the difficulty of undertaking the procedure accurately, the likelihood of complications or potential impact on the animal), the more training, ongoing support and oversight is likely to be required. Once an individual is trained, they must continue to be supported to achieve a high standard of skill. This includes assistance with accessing animal facilities, following Standard Operating Procedures or published guidelines, and how to respond when there are complications.

Individuals selected to deliver training and assessment must be considered for their ability to prepare training sessions and materials (including assessment criteria). Trainers should consider the learning styles of participants and ensure the mode of delivery and group size is appropriate for the skill being taught. Trainers need to be able to break down skills and be able to provide effective feedback to facilitate learning. Training and assessment of animal care staff is managed within facilities, but they may seek support from other areas for training in specialist skills or where there is limited availability of training locally.

Monitoring, Intervention and Reporting

Record Keeping

Primary Investigators must keep training records for all staff and students working under their approved protocol. These records must be included in any ethics protocol application under which the procedures will be performed, including date of completion and competency assessment form or certificate of competency. Additionally, all individuals trained should keep a record of their own training.

Unexpected Adverse Events

When there is an event that has, or may have, a negative impact on the wellbeing of animals that was not foreseen in the approved animal ethics protocol, an Unexpected Adverse Event Report is required.

If an unexpected adverse event is believed to have occurred due to inadequate technique, or there is any uncertainty around whether an event should be reported, then advice should be obtained from one of the ANU Vets on 02 612 **51130** immediately (this phone is monitored out of office hours).

Trainers and Assessment

Trainers must be assessed for their ability to deliver training in a technique, not just their ability to perform the technique. Competency assessment forms should be available for all specific techniques. Training should include a description of why particular techniques may be preferable over others, and should include the risks to both the human and the

animals. Those not yet competent should be given clear instruction as to how to improve their technique.

Those who deliver training must be competent in the procedure they are training. In addition, trainers must complete a Trainer and Assessor Competency Assessment, or be suitably qualified and be listed as a trainer on an approved Training and Assessment Plan. If trainers are not in a position to have their technique reassessed due to minimal number of other personnel trained in the procedure, a veterinarian or other trained and competent individual can assess technique every three years to minimise procedural drift.

The ANU Veterinary Services Team is also available to assist with some training and assessment of specialised techniques. Where the veterinary team may not be skilled in a particular technique, they are still able to assess an individual's approach by assessing the basic approach and the impact on the animal.

Where training and assessment in a procedure is delivered by multiple people, trainers must regularly collaborate, ensuring a standardised training program is followed to avoid procedural drift, and promote continuous improvement to best practice.

Minimum Requirements

Responsibilities

- Animal Ethics Training is compulsory for all Primary Investigators and Nominees listed on an ANU Animal Ethics protocol as well as all ANU personnel who will be working with animals. This includes students, facility animal care staff, and researchers conducting observation-only wildlife studies. Training must be completed before starting any work with animals. More information: Animal Ethics: Training - Staff Services - ANU
- ANU provides support for training programs run by the Australian Phenomics Facility (APF) for rodent training, and the provision of training and oversight by the ANU Veterinary Services team.
- Where training in a procedure involving animals requires assessment of competency, a Training and Assessment Plan for the associated procedure must be submitted to the AEC for approval.
- Facility animal care staff must be under the direct supervision of a person who is competent until they have been assessed as competent in basic animal care or any other specific procedure.
- It is the responsibility of the Primary Investigator to ensure that each person working with animals on their protocol is adequately trained and deemed competent for the procedures they undertake. Each individual listed on a protocol is also responsible for seeking training, and re-training where appropriate, to gain confidence in techniques required.
- It is the responsibility of the Investigator to seek refresher training where they may have lost confidence, have not performed a technique in some time, or ahead of certification expiry. As a general guide, where feasible, advanced techniques should be kept in practice monthly to ensure consistent application of technique.

Biomedical Training

Before being granted access to an ANU animal facility, individuals are required to be competent in basic animal handling and restraint, and performing the approved methods

of euthanasia relevant to their protocol. If an individual is not yet competent in these techniques, they will not be granted access to an animal facility, and must not be left unaccompanied performing animal care work at any time.

Where projects require the use of 'advanced techniques' (e.g. sample collection, administration of substances, euthanasia, anaesthesia, or surgery), the individual must first demonstrate a high level of competence in basic animal handling and restraint.

Where an individual requests training soon after initial basic animal handling training, it is at the trainer's discretion as to whether the individual is ready to progress to advanced techniques. Where an individual is not yet competent, direct supervision by a competent person is expected to occur within the research group. Where competency cannot be achieved within a desired timeframe, research groups may need to request such services be provided by competent individuals.

Where a training program does not exist for a procedure, the research group must seek training options and further advice from the ANU Veterinary Services Team, and submit a Training and Assessment Plan for AEC approval.

Staff and students working in OGTR-certified animal facilities will be required to complete the Gene Technology, Biological Safety and Chemical Safety courses. Further information on these courses is available from your supervisor or on HORUS.

Appendix I summarises the training and assessment courses offered, and the requirements for refreshers of biomedical rodent procedures undertaken at ANU.

The practice of retro-orbital bleeding is supported only where the individual is highly skilled in the specific restraint techniques required, and shows a high degree of proficiency. Individuals will be selected by facility staff for training in this technique and research group staff may not be supported to develop this skill if they do not have the required experience.

Wildlife Training

Given the limited numbers of animals available and the relative unique nature of each wildlife species, training in wildlife handling and procedures are completed 'in the field'.

Due to the varied nature of wildlife work, all practical training is conducted by the project supervisor or their authorised delegate that is experienced and competent in the approved techniques/procedures. The Principal Investigator is ultimately responsible for ensuring the training has equipped the Investigator with the skills necessary to ensure they are able to perform their fieldwork with minimal impact on target and non-target species. Plans must be in place to ensure the timely treatment or humane euthanasia of any target or non-target species that are injured in the course of the fieldwork activities.

The AEC may not require proof of competency for low-risk procedures such as surveying or observation only, however Primary Investigators must ensure that all Investigators are adequately trained and competent to perform any procedure when not under direct supervision of a competent person. Where 'high-risk' procedures are undertaken (e.g. sample collection, trapping, restraint), individuals must provide proof of competency to the AEC before performing the procedure unsupervised. The Primary Investigator must include a copy of the associated Authority e.g. Australian Bird and Bat Banding Scheme

(ABBBS) Banding Authority, or provide a Training and Assessment Plan with their animal ethics protocol for AEC approval. The health and safety of the staff/students/volunteers working on a protocol must also be considered.

Appendix II is a guide to where training in wildlife procedures requires proof of competency.

Where groups choose to use the services of volunteers, they must do so in accordance with AEC Approved Document 005: Guidelines for the use of volunteers in animal based research projects.

Please note that individual states and territories may have specific requirements for training and competency assessment that must be followed. For example, those undertaking microchipping in Tasmania must be deemed competent by a registered veterinarian. More information on specific requirements are available through local state/territory departments, and you may consult with the animal ethics or veterinary services team for further advice.

Appendix I: Biomedical Rodent Training Requirements

BASIC ANIMAL SKILLS		
Course Code	**Skill**	**Refresher Requirements**
*ANZCCART ComPass	Animal Ethics Training	Every 5 years *(compulsory for all animal users)*
ANML02	Introduction to Mouse Care and Handling	Every 3 years
ANML05	Sharps Safety with Animals	Every 3 years

** The ANZCCART ComPass Animal Ethics Training course replaced the ANML03/ANML40 Animal Awareness course in 2021. Staff and Students who previously completed ANML03/40 must complete the ANZCCART ComPass course when their 5 year refresher training is due.*

ADVANCED SKILLS		
Course Code	**Skill**	**Refresher Requirements**
ANML06	Intraperitoneal Injection - Mouse	Every 3 years
ANML08	Intravenous Injection - Mouse	Every 3 years
**ANML20	Retro-orbital Blood Collection (ROB) - Mouse	Every year
ANML21	Tail Vein Blood Collection - Mouse	Every 3 years
ANML22	Introduction to Animal Anaesthesia ***(Note- this course does not indicate competency. Competency is assessed by ANU Vets)***	Every 3 years
ANML33	Oral Gavage - Mouse	Every year
ANML34	Intramuscular Injection - Mouse	Every 3 years
ANML35	Subcutaneous Injection - Mouse	Every 3 years
ANML36	Intradermal Injection - Mouse	Every 3 years
ANML37	Cardiac Bleed - Mouse	Every 3 years
ANML38	Intranasal Administration - Mouse	Every 3 years

*** Only highly skilled Individuals will be selected for training in ROB, this is not a routinely available Training option.*

Appendix II: Guide to Wildlife Training Requirements

Examples of techniques that do not require proof of competency	Examples of high risk procedures which require proof of competency
Bird surveying and identification using binoculars, scopes etc. This includes call playback.	Mist netting or cannon netting birds (this training is already monitored by the ABBBS so this would suffice as proof of level of competency)
Auditory surveys	Banding birds (this training is already monitored by the ABBBS so this would suffice as proof of level of competency)
Spotlighting of arboreal or large mammals	Bleeding or other invasive technique of any animal.
Elliott trapping or pitfall trapping for small mammals and lizards under the direct supervision of a competent person.	Independent trapping of small mammals and lizards.
Capturing and handling wildlife under the direct supervision of a competent person.	Independent capture and handling of wildlife.

The ANU Research Ethics Office or ANU Veterinary Services can offer further advice on the level of training and competencies required for wildlife procedures.

References and Resources

NHMRC. Australian code for the care and use of animals for scientific purposes 8th Edition 2013 (Sections 1.29; 2.1.5; 2.1.8) https://www.nhmrc.gov.au/about-us/publications/australian-code-care-and-use-animals-scientific-purposes [accessed 25th November 2022]

ANU. Procedure for Managing & Reporting Unexpected Adverse Events https://services.anu.edu.au/research-support/ethics-integrity/animal-ethics-policies-guidelines-and-forms [accessed 25th November 2022]

ANU. Guidelines for the use of volunteers in animal based research V1.0 [accessed 25th November 2022]