Document 015: Animal Handling and Procedure Training Standards V1.0

Background
The ANU recognises the need for skilled individuals to undertake procedures on animals for research purposes. It is a requirement, as per the Australian code for the care and use of animals for scientific purposes 8th edition 2013 (the Code), that all individuals working with animals are appropriately trained for the techniques they are expected to undertake.

General Information and Considerations

General Principles
Training of individuals should go beyond the basic ‘how to’ steps of a procedure and should include a thorough training including 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.

Those that have prior training from another institution will be assessed for competency 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 not had prior training.

Training for higher impact procedures will only be undertaken where there is clear justification for the use of the technique. This may include the inclusion of a technique in an approved animal ethics protocol or after discussion with the vets and during the feasibility and design of a technique for inclusion in an animal ethics protocol application.

The higher risk a procedure is (defined by the difficulty of undertaking the procedure accurately, the likelihood of complications or potential impact on the animal), the more training and ongoing support and oversight is likely to be required. Once an individual is trained they must continue to be supported by the research group 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 should be considered for their ability to prepare training sessions and materials (including assessment criteria). Trainers should ensure that the mode of delivery and group size is appropriate for the skill being taught and the learning styles of participants is considered. Trainers need to be able to break down skills and be able to provide effective feedback to facilitate learning. Animal care staff training is managed within the 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 should be included in any ethics protocol application including date of completion and where relevant, a 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 and 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).

Trainees and Assessment
Trainees should be assessed for their ability to deliver training on 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, should include the risks to both the animal and the human and those not yet competent should be given clear instruction as to how to improve their technique.

Those who deliver training may not be in a position to have their technique reassessed if there are minimal other people trained in the procedure. However, where feasible, a veterinarian or other trained and competent individual can assess technique every three years to minimise procedural drift.
Minimum Requirements

Responsibilities

- The 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 Veterinary Services team from Research Services Division.
- It is the responsibility of the Primary Investigator on each protocol 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, student or staff member, is also responsible for seeking training and re-training where appropriate to gain confidence in techniques required.
- It is the responsibility of the researcher, staff member or student to seek refresher training where they may have lost confidence or not performed a technique in some time. As a general guide advanced techniques should be kept in practice monthly to ensure consistent application of technique.

Biomedical Training

It is a requirement that all individuals with access to work within an animal facility are capable and competent in performing the methods of euthanasia relevant to their protocol. If an individual is not yet competent in these techniques, they will not be granted animal facility access 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, anaesthesia or surgery), the individual must first demonstrate a high level of competence in basic animal handling and restraint. This often requires some months of establishing confidence before progressing to training in ‘advanced techniques’.

Where an individual requests training soon after initial basic handling training, it is at the trainer’s discretion as to whether the individual is ready to progress to advanced techniques. Where the project requires advanced techniques and the individual is not yet competent, support is expected to occur within the research group. Where competency cannot be achieved within a desired timeframe then research groups may need to pay for such services to be provided by competent individuals.

Where a training program does not exist, or competency is not assessed (e.g. “Introduction to Anaesthesia”), the research group must provide training and keep records for themselves or, where available, seek training options and advice from the RSD Veterinary Services Team.

Staff and students working in 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 A summarises the training requirements for common procedures undertaken at ANU.

ANU Research Ethics Office Animal Experimentation Ethics Committee Approved Document AEEC
Approved Document _015_Standard_Training Requirements for Working with Animals V1.0

Release Date: 17/08/2020
Uncontrolled after printing
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, it is acknowledged that training in wildlife handling and procedures are completed ‘in the field’.

Where ‘high risk’ procedures are undertaken (e.g. sample collection, trapping, restraint), it is expected that individuals are trained to a level of competency and assessed by the research group. The Primary Investigator should provide a competency assessment guide with their ethics protocol for review by the AEEC. The Health and Safety of the staff/students/volunteers working on a protocol must also be considered.

Where groups choose to use the services of volunteers they must do so in accordance with AEEC 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.

The RSD 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.
## Appendix I: Biomedical Rodent Training Requirements

### BASIC ANIMAL SKILLS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Skill</th>
<th>Training Requirements No previous experience</th>
<th>Assessment</th>
<th>Refresher Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANML02</td>
<td>Introduction to Mouse Care and Handling</td>
<td>Full 3-day course (includes ANML05) + online component</td>
<td>Single session practical assessment + online component</td>
<td>Every 3 years</td>
</tr>
<tr>
<td>ANML03</td>
<td>The ANU animal Awareness Program</td>
<td>Attend seminar + online component</td>
<td>Attend seminar + online component</td>
<td>Every 5 years</td>
</tr>
<tr>
<td>ANML05</td>
<td>Sharps Safety with Animals</td>
<td>Given as part of ANML02 or separately in 1hr session + online component</td>
<td>Single session practical assessment + online component</td>
<td>Every 3 years</td>
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<tr>
<td>ANML11</td>
<td>Introduction to Musterer</td>
<td>Introduction session at the APF</td>
<td>N/A</td>
<td>As required</td>
</tr>
</tbody>
</table>

### ADVANCED TECHNIQUES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Skill</th>
<th>Training Requirements No previous experience</th>
<th>Assessment</th>
<th>Refresher Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANML20</td>
<td>Retro Orbital Sinus Blood Collection- Mouse</td>
<td>Initial handling sessions, mouse weighing competency, practice on deceased mice, live mice culled immediately, live mice kept to monitor for eye damage</td>
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<tr>
<td></td>
<td></td>
<td>* Individuals will be selected for training, this not a routinely available training option</td>
<td>Practical assessment</td>
<td>Every year</td>
</tr>
<tr>
<td>ANML06</td>
<td>Intraperitoneal Injection- Mouse</td>
<td>Practical training/assessment session</td>
<td>Single session practical assessment + online component</td>
<td>Every 3 years</td>
</tr>
<tr>
<td>ANML08</td>
<td>Intravenous Injection- Mouse</td>
<td>Practical training/assessment session</td>
<td>Single session practical assessment</td>
<td>Every 3 years</td>
</tr>
<tr>
<td>ANML22</td>
<td>Introduction to Animal Anaesthesia (* Note this course does not indicate competency)</td>
<td>Theory + Practical session at the APF, must have completed compressed gas ANU safety course + online component</td>
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<tr>
<td></td>
<td></td>
<td>Ongoing training with lab group. Assessment complete at own facility/lab by ANU vets.</td>
<td></td>
<td>Every 3 years</td>
</tr>
<tr>
<td>ANML33</td>
<td>Oral Gavage- Mouse</td>
<td>Practical training/assessment session</td>
<td>Single session practical assessment</td>
<td>Every year</td>
</tr>
<tr>
<td>ANML34</td>
<td>Intramuscular Injection- Mouse</td>
<td>Practical training/assessment session</td>
<td>Single session practical assessment</td>
<td>Every 3 years</td>
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<tr>
<td>ANML35</td>
<td>Subcutaneous Injection- Mouse</td>
<td>Practical training/assessment session</td>
<td>Single session practical assessment</td>
<td>Every 3 years</td>
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<tr>
<td>ANML36</td>
<td>Intradermal Injection- Mouse</td>
<td>Practical training/assessment session</td>
<td>Single session practical assessment</td>
<td>Every 3 years</td>
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<td>ANML37</td>
<td>Cardiac Bleed- Mouse</td>
<td>Must have completed ANML22 + Practical training/assessment session</td>
<td>Single session practical assessment</td>
<td>Every 3 years</td>
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</tbody>
</table>
References and Resources


ANU. Guidelines for the use of volunteers in animal based research V1.0 [accessed 15th July 2020]