

The Children's Medical Research Institute's Lab Animal Training Program

Prepared for the ARRP 2015 Animal Ethics Seminar

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Outline

- Introduction
- Identifying training needs
- Specifics of Training
- Competency & proficiency assessment



CMRI Animal Facility Overview

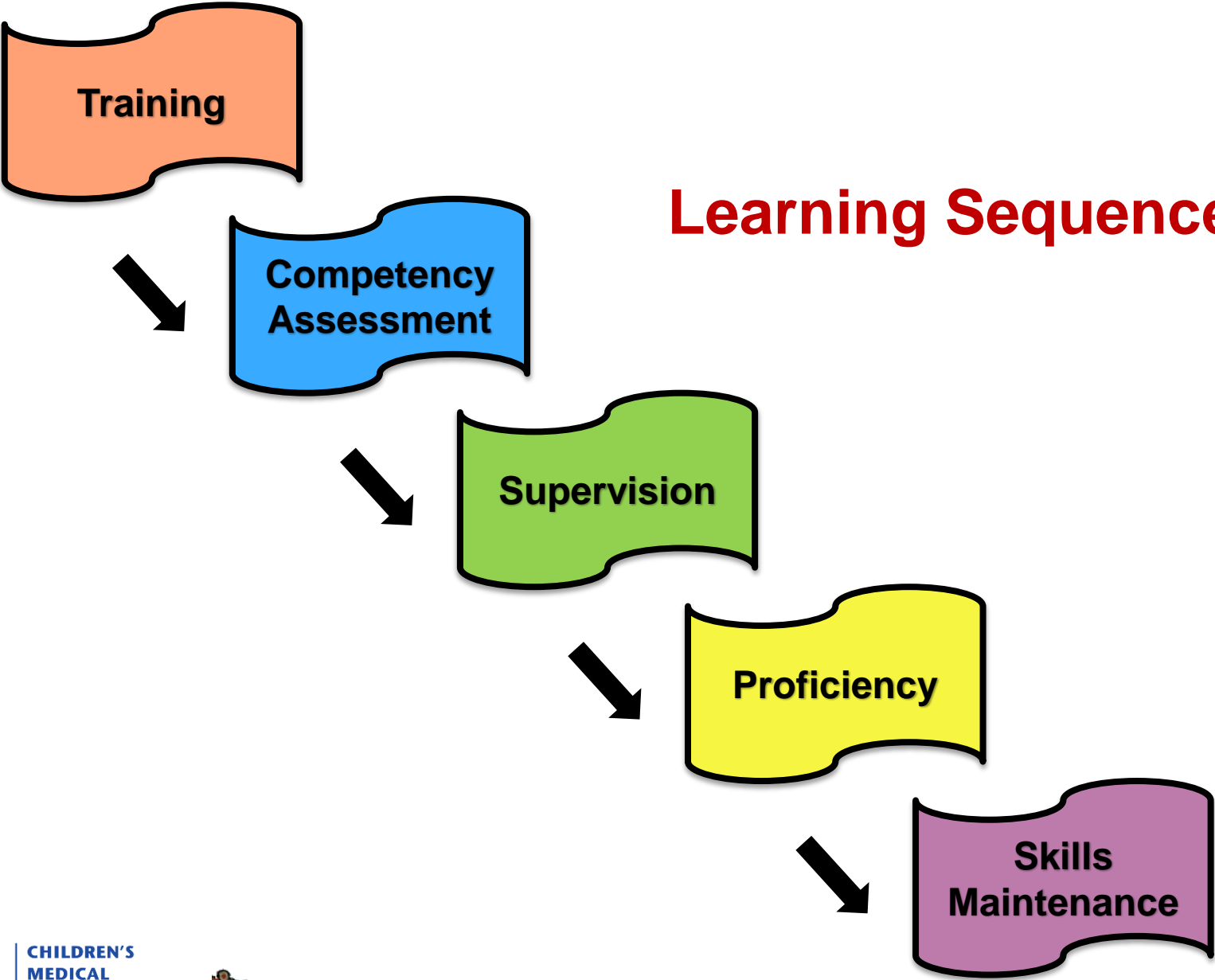
- CMRI BioResources Facility in Westmead, NSW: medium scale, mainly rodent-based (mice & rats), serving research investigators in cancer, gene therapy, embryology, cell signalling, eye genetics, protein biochemistry, genome integrity



- CMRI/CHW Animal Ethics Committee



Learning Sequence



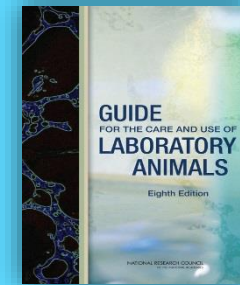
Training – Who Needs It?

- The Australian Code for the Care and Use of Animals for Scientific Purposes (8th Edition 2013) states that:
 - Clause 2.2.12: Institutions should ensure that **AEC members** have access to appropriate education programs and resources
 - Clause 2.4.4 [v.] **Investigators** must undertake education and training, and competency assessment, in accordance with institutional and AEC policies and procedures.
 - Clause 2.4.8 [xix] ...and provisions are made for the education, training and supervision of people nominated in the application, as appropriate
 - Section 2.5 The number, training and competence of **animal carers** are important factors that contribute to quality animal care.

The Guide

The 8th Edition of the Guide for the Care and Use of Lab Animals (NRC, 2011), page 15

“All personnel involved with the care and use of animals must be adequately educated, trained and/or qualified in basic principles of lab animal science to help ensure high-quality science and animal well-being.”



Identify training needs

- *Determine Qualifications of Research and Animal Care Staff:*
 - Previous knowledge, training & experience with lab animals
 - List qualifications on animal project application (Resume/CV)
- *AEC Oversight:*
 - New staff member accountability to PI
 - Statement and/or assurance on animal use protocol
- *Identify training needs through:*
 - a) AEC project application proposed methods
 - b) Animal technician findings and reporting of issues
 - c) Animal incident reports
 - d) Researcher feedback
 - e) Animal facility mgt committee meeting discussions
 - f) Follow up training after LATC skills evaluation



What we do at CMRI:



- New researchers included in AEC projects:
 - a. animal facility orientation and SOPs
 - b. online AALAS Learning Library (ALL) tutorial training requirement in between formal training schedules +Yr2
 - c. Lab Animal training course – one full day - lecture and practical sessions – 2x per year
 - d. One on one sessions for specific procedures / mentoring, repeat session(s)

- Other researchers including PIs:
 - a. Refresher online course through ALL every 3 years – on calendar schedule, automatic reminder from system once set
 - b. demonstration of procedures as required

Database as part of training tool for responsible animal care and use

- **Scope of animal house database orientation process:**
 - Animal requests – ordering timed matings, breeding orders, when to auto-assign animals
 - Keeping within approved animal numbers
 - Familiar with animal ethics project involved with – know purpose and procedure to use, role & responsibilities
 - Animal health monitoring – GM and all other strains
 - Know study endpoints
 - Animal incident reporting
 - Know animal care staff members
 - Be familiar with animal husbandry practices



Utilising database for monitoring animal health and wellbeing

- CMRI trains all animal users to make use of in-house database to record all animal procedures performed on animals and to monitor animal welfare status

HEALTH MONITORING

Strain: ARC/s Animal Numr: 373 DOB: 30-Mar-15 ACEC Project #: CS1

Date	16-May-15	17-May-15	18-May-15	19-May-15	20-May-15	21-May-15	22-May-15	23-May-15	24-May-15	25-May-15	26-May-15	27-May-15	28-May-15						
Day	-2	-1	0	1A	1P	2A	2P	3	4	5	6	7	8	9	10	11	12	13	14
Appearance / Activity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natural activity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflexes / Response external stimuli	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Condition of injection or incision site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Body weight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wound Healing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Respiration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dehydration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weight (grams)																			
Tumour (mm)																			
JUDGMENT SCORE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Assessor's Initials	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR
Pain Relief				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Antibiotics				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Anti-Inflammatory																			
Fluids																			
Mushy Food																			
Crumbled Feed																			
Hand Feeding																			
Supplemental Heat				X	X														

Version: 412
Role(s): AH_Manager

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**Online training,
created with you in mind.**

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Welcome Irma Villafior of Children's Medical Research Institute log out Expiration: 8/13/2016

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CMRI subscription on the AALAS Learning Library



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Select a track to view courses organized by job function. For all AALAS courses, choose the AALAS Courses track.

Children's Medical Research Institute Tracks

Children's Medical Research Institute Introductory Courses only for Mice and Rats

CMRI Mouse Users

Anesthesia, Analgesia, and Surgery

Species-Specific

Children's Medical Research Institute

[Introduction to Mice](#)

[Working with the Laboratory Mouse](#)

CMRI Rat Users

Anesthesia, Analgesia, and Surgery

Children's Medical Research Institute

[Introduction to Rats](#)

[Working with the Laboratory Rat](#)

CMRI Animal Users with Protocols involving Surgery

Anesthesia, Analgesia, and Surgery

[Aseptic Technique for Rodent Survival Surgery](#)

[Inhalation Anesthesia Systems for Rodents](#)

[Post-Procedure Care of Mice and Rats in Research: Minimizing Pain and Distress](#)

[Pain Management in Laboratory Animals](#)

Occupational Health and Safety

Animal Health and Well-being

Transgenics Training



In-house training/workshops

For Animal Carers, conduct researcher presentations



Continuing education activities – various topics

- Necropsy techniques for mice/rats
- Principles of veterinary suturing
- Lateral tail vein bleed
- Use of the anaesthetic machine
- Updates on rodent analgesia
- Recognising pain and distress in lab animals



More Continuing Education Opportunities for Lab Animal Care Personnel

- Participation in lab animal science meetings & workshops, feedback sessions
- On the job training – husbandry procedures



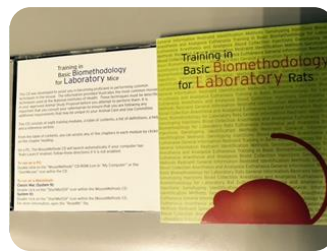
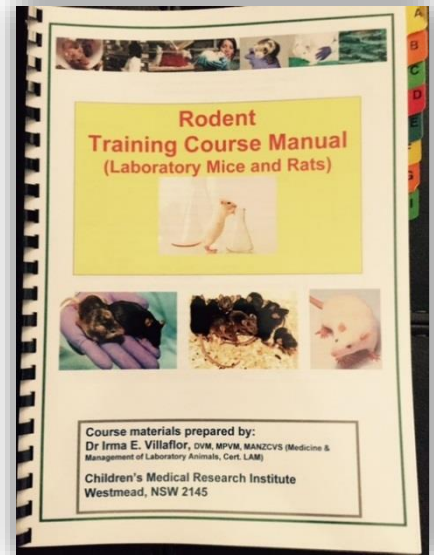
- Relevant reference materials / AALAS & Jax webinars, LAWTE
- In-house lectures during group meetings / short seminars
- Virtual Lab Animal Science Conference by Lab Roots – complimentary held since Feb 2013 on annual basis

Research Investigators – Reinforcing Training and Providing Updates

- Training on specific animal procedures proposed and species used
- 2x yearly CMRI Lab Animal Training Course
- Continuing education AALAS and Jax webinars, in-house seminars
- Virtual lab animal science conferences

LECTURE TOPICS – CMRI/CHW Lab Animal Training Course

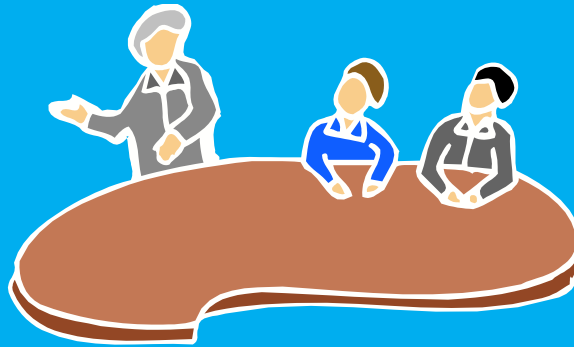
- Introduction and Use of Rats and Mice in Research
- Regulations and Animal Facility Accreditation – Legislation, Australian Code, AEC functions, Role of ARRP, the 3Rs
- Mouse Nomenclature and Genetic Terminology
- Rodent Biology
- Handling, Restraint and Identification
- Husbandry and Maintaining Healthy Animal Colonies
- Rodent Anaesthesia and Analgesia
- Rodent Surgery
- Euthanasia
- Natural Pathogens of Lab Mice & Rats and their effect on research
- Biosafety and Biosecurity Issues related to GEM
- Animal Facility Services and Reporting of Concerns on Animal Use



AEC Members - Training Opportunities

- Provision of updates on regulations, guidelines and policies
- Regular inspection/site visits
- Invitation to attend meetings / workshops / refresher courses – ANZCCART / ARRP Animal Ethics Seminars
- Web-based training e.g. AALAS webinars
- Interaction with management, researchers and animal care staff on important events
- E-newsletters, conference information resources





Competency Assessment at CMRI

How is competency determined?

- Non-compliant findings thru animal incident reporting
- Observation of bi methodology techniques and procedures during practicals & daily activities
- Adequate animal welfare following performance of procedures / evaluation of surgical records/monitoring sheets
- Research results
- Training records / evaluation of surgical records



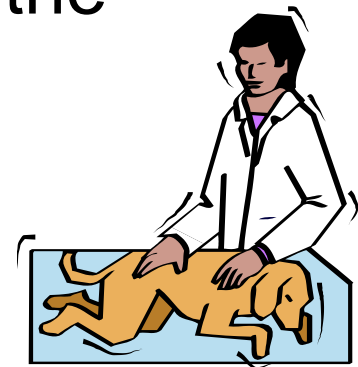
How is competency & proficiency achieved?

- Training by facility veterinarian and animal care supervisor and PI or senior research officer
 - Orientation program – individual or group face-to-face; online, dialogue
 - Hands-on training / Techniques Demonstration – species specific, small groups, trainer can observe proficiency based on experience
 - Re-training
- ❖ Competency is achieved through a combination of education, training, skills, and experience



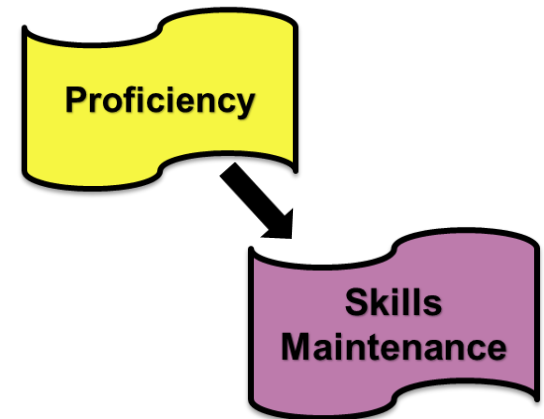
Supervision

- Staff carrying out procedures on animals, taking care of animals or performing euthanasia shall be supervised initially in their tasks until they have demonstrated the requisite competence.



Methods used to Assess Knowledge & Skills

- **Written examinations**—in-house courses and AALAS cert
- **Practical session check-offs** – must demonstrate animal handling techniques and procedures; **training checklist**
- **One-on-one staff training sessions** – may require multiple sessions depending on skill and confidence level e.g. oral gavage, blood collection, surgical procedure
- PI or Senior researcher also acts as supervisor until staff is deemed competent as per AEC project approval conditions



Conclusions



- Consistency in assessment helps attain proficiency.
- Providing opportunities for training staff are important to help with reproducibility of research outcomes.
- Good communication and support from senior management is vital for effective teaching and learning.
- Evaluating animal training programs will help improve standards and ensure animal welfare.

