

	Flinders University Safe Work Method Statement Rabbit – Antibody Production 18/06/19		
			College of Medicine and Public Health Animal Facility
SWMS Number	RA Number	RA Score	
SWMS- 4.10	RA 4.10	Medium	
Contact Person	SWMS prepared by	AWC Approval Date	Review Date
Roxanne Collingwood	Roxanne Collingwood	18/06/2019	June 2021

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Legislation

- *Australian Code for the Care and Use of Animals for Scientific Purposes 8th Ed.*
- *Animal Welfare Act 1985*
- *Animal Welfare Regulations 2012*
- [Gene Technology Act 2000](#) (the Act)
- [Gene Technology Regulations 2001](#)
- *Work Health and Safety Regulations 2012*

University Policy

- Work Health and Safety Policy 2013
- Responsible Conduct of Research Policy 2016
- NHMRC Guidelines

Local Policy

Use of the College of Medicine and Public Health Animal Facilities by all staff and researchers of the College of Medicine and Public Health, Flinders University, is subject to awareness of, and adherence to the following:

Research Involving Animals:

- The University holds a licence for the use of animals for teaching and research purposes. To satisfy the requirements of the licence, anyone wishing to undertake teaching and research using animals must submit a proposal to the Animal Welfare Committee (via the Animal Ethics Review Sub-Committee). No work with animals may commence until written approval has been received from the Animal Welfare Committee. Standardised application forms for Research and Teaching can be found on the Flinders University website listed below. It is your responsibility to regularly check this site for updates to guidelines, forms etc
http://www.flinders.edu.au/research/researcher-support/ebi/animal-ethics/animal-ethics_home.cfm

- **All staff and students involved in animal research must complete Animal Ethics Online Training (AEOT) and must also regularly attend Animal Researcher Information Sessions (ARIS).**

Safe Work Method Statement

Refer to Risk assessments, Safe Work method Statements for chemicals, processes and plant equipment where appropriate. All projects must have an accompanying Risk Assessment signed by the Animal Facility Manager

- RA 4.0 Rabbit- Sexing, Handling and Restraint
- SWMS 4.0 Rabbit- Sexing, Handling and Restraint
- SWMS 4.1 Rabbit Injection Techniques
- RA 4.1 Rabbit Injection Techniques
- SWMS 4.4 Rabbit Anaesthesia and Analgesia
- RA 4.4 Rabbit Anaesthesia and Analgesia
- SWMS 4.7 Rabbit Humane Euthanasia
- RA 4.7 Rabbit Humane Euthanasia
- SWMS 4.9 Rabbit Blood Collection
- RA 4.9 Rabbit Blood Collection

Personal Protective Equipment Required

- **Gloves – to be worn throughout entire procedure**
- **Gown**
- **Mask**
- **Hair Net**
- **Shoe Covers**

Hazards and Controls

- **Animal bites- training, demonstrate competency, adhere to SWMS**
- **Animal Scratches- training, demonstrate competency, adhere to SWMS**
- **Animal Allergies- wear PPE when handling or handling dirty cages to stop the potential development**
- **Needle Stick- Do NOT recap needles, put straight into sharps container**

Before Work Commences

Ensure that you are aware of the locations of the following:

- **Spill Kit**
- **Fire Extinguisher**
- **Eye Wash**
- **Exits**

Risk Assessment and SDS (Safety Data Sheet) - Ensure that you have read and understood for all the substances being used.

Equipment

- **Ensure that you have read and understood the Risk Assessment and Safe Work Method Statement**
- **Obtain training before using any equipment**

General Information

- **All procedures are to be performed by trained competent staff.**
- **Training is available from senior animal house staff or Animal Welfare Officer.**
- **Evidence of training is available in the “Training Needs Analysis”**

NHMRC Guidelines - Maximum Blood Collection Volumes

Weight Of Rabbit (kg)	Total Circulating Blood Volume (mL)	<7.5% Minor Bleed (mL) repeatable weekly	<10% Moderate Bleed (mL) repeatable fortnightly	<15% Severe bleed (mL) repeatable every 3 weeks
2	140	10.5	14	21
2.5	175	13.125	17.5	26.25
3	210	15.75	21	31.5
3.5	245	18.375	24.5	36.75
4	280	21	28	42

Preparation Of Antibody Rabbit - Day 0

- Ensure the appropriate record sheets are available:
 - (i) Antibody Rabbit Coversheet specific to study being undertaken;
 - (ii) Antibody Clinical Record Sheet;
 - (iii) Injection Sites Diagram;
 - (iv) Schedule of procedure - supplied by researcher; and
 - (v) Procedure list.
- Ensure the animal selected is a normal healthy rabbit.
 1. Restrain and weigh the rabbit, then check the microchip identification number.
 2. Fill out the animal details (section 1) on the Clinical Record Sheet with the:
 - (i) AEC project number;
 - (ii) Pen/cage #;
 - (iii) Strain;
 - (iv) Weight (start weight);
 - (v) animal number (microchip number and ID from schedule);
 - (vi) DOB; and
 - (vii) Sex.
 3. Fill out the Clinical Record Sheet “section 2 – monitoring” with the date, time, and procedure to be undertaken. Use the Clinical Record Coversheet as reference to score for each criteria.
 4. Anesthesia is not required, although light sedation 0.1ml/kg sc ACP10 (Acpepromazine 10mg/ml) is recommended as per “*SWMS 4.1 Rabbit Injection Techniques*”.
 5. Clip (with appropriately sized clippers) the area along back and sides where the injections will be located.
 6. On Day 0 (as per schedule), take 8-10ml of blood from the marginal ear vein as per “*SWMS 4.9 Rabbit Blood Collection*”.
 7. Place blood into blood tubes, labelled with Rabbit ID (both Microchip and the ID given on the schedule), immunogen, and date. Place blood in small fridge located in 3E220, next to large freezer for researcher to collect
 8. Place rabbit back in his/her pen and monitor their recovery for 10 minutes. They will be checked and their condition recorded on the Clinical Record Sheet daily, and weighed weekly, until Study completion.

Daily Procedures – From Day 0

- The Antibody Rabbit is to be checked daily for signs of ill health and granulomas, and the Clinical Record Sheet filled out daily.

Weekly Procedures - From Day 7

1. Restrain and weigh the rabbit, then check the microchip identification number against the number recorded on the antibody production documents.
2. Refer to the Schedule specific to the rabbit.
3. Collect the antigen to be injected (if required according to schedule) from small fridge in 3E220.
4. Anesthesia is not required, although light sedation 0.1ml/kg sc ACP10 (Acepromazine 10mg/ml) is recommended as per “*SWMS 4.1 Rabbit Injection Techniques*”.
5. Label the blood collection tube/s.
6. Blood collection of 8-10ml as per *SWMS 4.9* is to be taken before the antigen is injected.
7. Place blood into plain blood tubes, labelled with Rabbit ID (both Microchip and the ID given on the schedule), immunogen, and date. Place blood in small fridge located in 3E220, next to large freezer for researcher to collect.
8. Once blood is collected, (if required) prepare to inject the antigen. Antigen is supplied in 2ml aliquots.
9. If the hair has begun to regrow, clip the hair along the back and sides, taking care around granulomas.
10. Using a permanent marker, draw 8 -10 spots (4-5 per side) to indicate evenly spaced injection sites.
11. If granulomas are present, attempt to inject clear of these sites to minimise further inflammation.
12. Inject approximately 0.2ml per SC site (refer to “*SWMS 4.1 Rabbit injection techniques*”) and evenly spread the 2ml over 8-10 sites in total (preferable 5 on each side with even spacing). Gently apply pressure to any site that may bleed following injection, until bleeding ceases.
13. Fill out one of the rabbit antibody production injection sites form per injection per day.
 - (i) Note the injection sites for the same day marked with an ‘X’.
 - (ii) Note any granulomas arising from previous injection days with a ‘O’ or circle to indicate size and location.
 - (iii) Ensure to fill in the rabbit number (as noted on schedule and microchip ID), date, and initials of technician injecting the antigen.
14. Record on the animals’ Clinical Record Sheet that blood has been collected and/or antigen injected.
15. Return the animal to his/her pen and monitor recovery for 10 minutes.

SWMS Review

This SWMS currently applies to the animals housed in the College of Medicine and Public Health Animal Facility. This SWMS will be reviewed 3 yearly, but also updated more frequently as policies, techniques and animal care requirements change.

Position	Name	Contact Details
Manager Animal Facility	Roxanne Collingwood	8204 4380 roxanne.collingwood@flinders.edu.au
Animal Welfare Officer	Dr Lewis Vaughan	0450 424 143 awo@flinders.edu.au

Useful References

<http://www.nhmrc.gov.au>

<http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/home-1>

<http://www.adelaide.edu.au/ANZCCART/>

http://www.flinders.edu.au/research/researcher-support/ebi/animal-ethics/animal-ethics_home.cfm

Any questions regarding the above guidelines and any technical advice/ assistance required can be directed to Animal Facility Manager.