

Procedure Title:	Animal Husbandry
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Manual Classification:	Section 9 – Applied Research
Linked to Policy:	#9-902 Animal Care and Welfare
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Contacts for Procedure Interpretation:	Vice President Applied Research and Innovation

1.0 – Purpose

The purpose of this procedure (the “**Procedure**”) is to ensure alignment of animal husbandry practices with provincial and national standards, including the CCAC’s *Guideline on Husbandry of Animals in Science* (2017).

Terms not defined in this Procedure have the same meaning found in the College’s Access to Information and Protection of Privacy Policy.

2.0 – Procedure

2.1 - Overview

The Canadian Council for Animal Care (CCAC) *Guidelines: Husbandry of Animals in Science* (2017) outlines the guiding principles for the ethics and care of all animals in science. It details the standards that are expected to be met and provides a framework for the implementation of the Three R’s (Replacement, Reduction, Refinement). The guideline applies to all animals held in the institution, including wild animals brought into animal facilities for short- or long-term holding, but does not apply to wild animals in the field (CCAC, 2017). Field studies are covered in *CCAC guidelines on: The Care and Use of Wildlife* (2003).

“Husbandry practices must aim to provide a good quality of life for the animals.” (CCAC 2017)

2.2 – Procedural Guidelines for Animal Husbandry

- a) Trained, competent staff must ensure through regular inspections that all aspects of animal husbandry align with the standards outlined in this procedure.
- b) Standard Operating Procedures (SOPs) are required for each Animal Care Facility to ensure proper husbandry practices are performed consistently. It is the responsibility of the Animal Care Facility staff to compile SOPs for all routine tasks or for particular procedures that are to be followed to achieve a desired outcome. SOPs must be reviewed annually by the Animal Care Facility staff.

- c) New SOPs and changes to existing SOPs must receive Animal Care Committee (ACC) approval prior to implementation.
- d) Animal Care Facilities which require special services (e.g. heating, cooling, 24h staff access) must outline their requirements in a Service Level Agreement with the Physical Resources department to ensure their needs are met at all times.
- e) All Animal Care Facilities must keep accurate and up-to-date records and reports of housing and husbandry activities.

2.3 – Animal Identification

- a) The method for identifying animals should be appropriate for the type of animal and staff should minimize any pain, distress and discomfort.
- b) As per CCAC requirements, all animal enclosures should be clearly marked detailing
 - Sex and date of birth
 - Source and number of animals
 - Specific instructions for their care
 - Protocol number
 - Name of PI
- c) Estimates may be acceptable if providing some information is not practical (e.g. newly hatched fish).
- d) Identification and marking techniques must be performed by trained and competent personnel.

2.4 – Housing Management

- a) All animal housing must meet the physical, behavioural and social need of the animals.
- b) Housing management should take into account
 - Species and strain/breed
 - Age and sex
 - Physical development and temperament
 - Hierarchy etc.
- c) Housing must address
 - Separation of animals according to species and health status (exceptions may apply)
 - Space requirements
 - Social/single housing
 - Requirements for outdoor environments

2.5 – Food

- a) All food provided must be high quality, appropriate (species, age), and meet the nutritional needs of the particular animal. Any exceptions to this as well as required fasting must be approved by the ACC.
- b) Food must be purchased from a reputable and reliable supplier and food acquisition records must be kept by Animal Care Facility staff.
- c) Food must be stored in designated storage areas, off the ground, in vermin-proof containers, and in accordance with manufacturer's recommendations or in accordance

with standard practices for temperature, humidity, expiration date etc for not commercially prepared food.

- All Animal Care Facilities must maintain SOPs that ensure the cleanliness of the storeroom
- Expiry dates or manufacturer's recommendations for shelf life must be adhered to
- Small quantity of feeds may be kept in appropriate containers in animal holding rooms that meet the manufacturer's recommended conditions
- Food records must be kept and maintained, including food decanting, milling date, food ingredients etc.

2.6 – Water

- a) Fresh, clean drinking water be available to all animals at all times. Any scientific related water restrictions must receive prior ACC approval.
- b) Water quality must be monitored at least annually and should meet Canadian Drinking Water guidelines – acceptable ranges will depend on species and scientific study.
- c) Water dispensing systems should provide sufficient quantity of water to all animals, minimize potential of contamination, spread of disease, and flooding of the environment.
- d) Water containers should be appropriate for species and type of husbandry. If new water delivery systems are introduced, animals must be observed until they are appropriately adopted to the new system.

2.7 – Bedding and Shelter

- a) Bedding material should be safe, consistent and species-appropriate to ensure a healthy environment, animal comfort and expression of species behaviour.
- b) Bedding material must be purchased from a reputable supplier and must be stored off the ground and according to manufacturer's recommendations.
- c) Shelter should be provided where important to the welfare of the animal.

2.8 – Monitoring Requirements

- a) All Animal Care Facilities must maintain detailed SOPs outlining health and behavioural monitoring to ensure that sick or injured animals are identified and treated quickly:
 - Routine assessment of physical health
 - Monitoring for obvious external signs in the animals
 - Procedures if a change in health and/or behaviour is detected
 - Pathogen surveillance, as appropriate to the species
 - Requirements for the introduction of new animals
- b) Any modification to an animal's environment should be carefully monitored and introduction of animals should be supervised by trained and competent staff. Animal Records must be maintained and incidences must be recorded on the Incident Report Form and forwarded to the ACC by Animal Care Facility staff.
- c) It is the responsibility of the PI to identify and outline study specific monitoring requirements and communicate this requirement to animal care staff and the ACC.
- d) All Animal Care Facilities must ensure daily monitoring of environmental parameters, as relevant for the species contained in the facility.

- Monitoring data must be readily accessible to PIs, Animal Care Facility staff and other regulators
 - Automated monitoring must be supplemented by monitoring by humans at least once daily
 - Records of environmental monitoring must be kept centrally and be kept for at least one year
- e) If environmental conditions in the Animal Holding facility fall outside the minimum or maximum range for the species, staff must follow the response protocol to remedy the problem as quickly as possible.

2.9 – Sanitation

- a) SOPs should be created detailing cleaning and sanitation practices based on the species, phenotype of animals, type of housing, density of animals, and the ventilation system to promote the health of animals.
- b) All animal housing must be cleaned and sanitized regularly. Frequency and specific requirements will depend on species and type of animal, density of animals, type and size of housing, bedding etc. in accordance with CCAC *guidelines for specific types of animals*.

2.10– Roles and Responsibilities

- a) Senior Administrators:
 - Provide support and resources to ACC and Animal Care Facility staff to maintain compliance with animal husbandry standards
 - Ensure Service Level Agreements are in place for Animal Care Facilities requiring specific services and/or environmental conditions
 - Ensure appropriate training of Animal Care Facility staff
- b) Principal Investigator:
 - Ensure animal husbandry practices are aligned with ACC-approved AUP and Animal Holding standards as outlined in this procedure
 - Inform ACC if deviations from AUP are required
 - Confirm Animal Care Facility staff and Animal Users as mentioned in AUP are trained and can competently perform assigned tasks
 - Report concerns to Animal Care Facility staff and ACC Chair
- c) Animal Care Facility staff:
 - Ensure animal husbandry practices are aligned with Animal Holding standards as outlined in this procedure
 - Promptly act on any animal husbandry and environmental concerns/deficiencies and report concerns to Supervisor if they cannot be readily resolved
 - Create Animal Care Facility SOPs and review existing SOPs annually and forward new or modified SOPs to ACC for approval
 - Work collaboratively with ACC, PIs and Supervisor to address concerns and deficiencies
- d) Animal Care Committee:
 - Review new and modified Animal Care Facility SOPs

- Review incident reports and work collegially with PI/Animal Care Facility staff to reduce future risks

3.0 – Related Documents

- Animals for Research Act, R.S.O. 1990, c. A.22
- Canadian Council on Animal Care: Ethics of Animal Investigation
- Canadian Council on Animal Care: Terms of Reference for Animal Care Committees
- Canadian Council on Animal Care: Social and Behavioral Requirements of Experimental Animals (SABREA)
- Canadian Council on Animal Care Guidelines on: Husbandry of Animals in Science.
- Canadian Council on Animal Care Guidelines on: The Care and Use of Wildlife
- Policy #9-902 Animal Care and Welfare
- Operating Procedure #9-902A: Animal Care Committee Terms of Reference
- Operating Procedure #9-902B: Animal Use Protocols
- Operating Procedure #9-902C: Scientific Merit Review of Animal Use Protocols (AUPs)
- Operating Procedure #9-902D: Pedagogical Merit Review of Animal Use Protocols (AUPs)
- Operating Procedure #9-902E: Post Approval Monitoring (PAM)
- Operating Procedure #9-902F: Animal User Training Program
- Operating Procedure #9-902G: Reporting of Concerns
- Incident Report Form

4.0 – History of Amendments & Reviews

Original approved by SMT September 25, 2019

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