# Purpose

The purpose of this policy is to ensure alignment of Laboratory Animal Facility ('Facility') operations associated with Western's Research Community with national and provincial standards, including CCAC's Guidelines on Laboratory Animal Facilities – characteristics, design, and development[1] and Regulation 24 of the Animals for Research Act.[2]

# Rationale

Canadian Council on Animal Care's Terms of Reference for Animal Care Committees (ACC) states that ACC's must ensure "*adequate animal care and management of the animal facilities*". Appropriate animal husbandry supports positive animal-based science outcomes; conversely, its absence can have significantly detrimental impacts upon research results.

# Scope

This policy applies to all Animal Facilities and related stakeholders associated with Western's Research Community.

# Policy

## *Regulatory Alignment*

Facilities must comply with the *Animals for Research* Act, R.S.O. 1990, c. A.22.

- All animal holding and procedure spaces - Reg. 24
  - Sect 3 – Spaces must be maintained in a 'neat and orderly condition free of refuse, debris and vermin.'[3]
  - Sect 4 – Every room must be 'maintained in a clean condition.' Floors, walls, doors, windows, ceilings, light fixtures, aisles, drains, and pipes must be maintained as per this section.[4]
- Animal holding areas and associated equipment and supplies – all applicable sections

Facilities must comply with CCAC's G*uidelines on Laboratory Animal Facilities,* and related addenda[5]

[1] Canadian Council on Animal Care – retrieved from https://www.ccac.ca/Documents/Standards/Guidelines/Facilities.pdf on October 24, 2018
[2] Government of Ontario – Animals for Research Act. R.R.O. 1990, Reg 24 Research Facilities and Supply Facilities. retrieved from https://www.ontario.ca/laws/regulation/900024 on Dec 4, 2018
[3] Animals for Research Act, R.S.O. 1990, c. A.22, Reg. 24(3) Retrieved 05MAR2019 from https://www.ontario.ca/laws/regulation/900024
[4] Animals for Research Act, R.S.O. 1990, c. A.22, Reg. 24(4) Retrieved 05MAR2019 from https://www.ontario.ca/laws/regulation/900024
[5] Canadian Council on Animal Care. CCAC guidelines on laboratory animal facilities. Retrieved on 1MAR2019 from https://www.ccac.ca/Documents/Standards/Guidelines/Facilities.pdf / Retrieved on 23SEP2019 from https://www.ccac.ca/Documents/Standards/Guidelines/Addendum-Laboratory-Animals-Facilities_heating-ventilation-air-conditioning.pdf

## *Facility Design*

**SECURITY –** Facilities must be secured from the general public, and accessible by approved personnel only and utilize security systems that limit access to authorized individuals only (G29)[67]

**DESIGN –** Facilities must be designed to

- ensure access to a high-quality source of air (G4);
- have access to reliable, consistent services, including potable water, electricity, and sewage disposal (G3/G62);
- at all times provide to animals with good quality air at the appropriate temperature and humidity levels (G 'D');
- isolate excessive noise from animals, or other species
- segregate
    - clean from dirty activities and storage to reduce cross-contamination (G1 / G26 G36 / G48-55)
    - different animal species and known or unknown health statuses (G 'F')
    - newly arrived animals (clean versus dirty)
    - animals undergoing invasive procedures
- necropsy areas must protect users to eliminate the potential spread of agents of laboratory animal disease (G28).
- house animals comfortably in a suitable environment with sufficient space to service the animals
- facilitate animal and supplies receipt and quarantine (G1);
- provide designated storage areas other than corridors and animal holding rooms for related equipment and supplies (G4/G24/G27);
- provide procedural areas separate from housing areas, e.g., for invasive procedures, surgery (G 'G');
- limit the use of public areas for movement of animals and dirty caging (G2)
- facilitate traffic and air flow from cleanest to dirtiest areas (G58 / G60)
- promote and facilitate biosecurity and human safety (G37 / G39/ G40 / G41 / G64)

**SANITATION AND WASTE –** Facilities must

- be designed to facilitate sanitation processes, including access to hot and cold water (G 'A' / G63)

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[7] [7] Canadian Council on Animal Care. CCAC guidelines on laboratory animal facilities. Guidelines E & 29. PP. 15, 30

- use durable materials and finishes that are impervious and resistant to water and chemicals used in their sanitation (G 'B' / G59)
- have access to appropriately sized and ventilated sanitation and as required, sterilization equipment to accommodate the needs of the facility (G 'C' / G19-21)
    - related equipment must be checked on a regular basis through the use of temperature and microbiological monitoring (G22)
    - the cagewash dirty side must have strongly negative air pressure (G21)
- provide a waste storage area that accommodates the accumulated waste between disposals
- for waste storage areas, have a ventilation system that exhausts external to any part of the building and adjoining buildings
- dispose of all wastes safely according to all federal provincial and municipal regulations (G37)
- provide drains in areas where water is used extensively for cleaning (G66)

## PROCEDURE SPACES

Procedures spaces must be located as close as possible to associated animal holding areas.

### *Spaces Used for Surgery*

Spaces used for surgery must be segregated from other usage and traffic flow and be maintained in a very clean and uncluttered state.

The surgical surface must be constructed of impervious, smooth, readily disinfected material.

Areas used for animal anesthetic induction and surgical preparation must be distinct from the sterile areas used for surgical operation.

If gas anesthesia is used, there must be an efficient system for evacuating waste anesthetic gases.

Associated ACC-approved Standard Operating Procedures must be followed, unless justified within the AUP and pre-approved by the ACC.[8]

In addition to the previous statement, recovery surgeries must be performed under aseptic conditions using currently acceptable veterinary standards,[9] including but not limited to:

- Instruments, supplies must be aseptically prepared, appropriately stored and used.
- A dedicated and distinct space must be allocated for surgeon preparation and scrub, and post-operative recovery.
- Ancillary animal support equipment, e.g., heat lamps, monitoring equipment, must be available and appropriate.
- Airflow must be strongly positive.

[8] ACC SOPs are available via the ACC's OWL Site: https://owl.uwo.ca/portal/site/

[9] Canadian Council on Animal Care. CCAC guidelines on laboratory animal facilities. Guideline 10. Retrieved on 1MAR2019 from https://www.ccac.ca/Documents/Standards/Guidelines/Facilities.pdf

### ANIMAL TRANSPORT TO/FROM FACILITIES

Animal transport between and external to Facilities must align with the following ACC-approved standards:

- Institutional standard operating procedures (SOPs) for animal transport
- Facility-specific biosecurity standards and entry/exit procedures
- Institutional animal allergen risk mitigation policies and SOPs
- Institutional biosafety and biosecurity policies and SOPs
- *Extra-Vivarial Spaces* Policy POL-016

## *Facility Operations*

Institutional senior administrators with responsibility for the infrastructure associated with Facilities must ensure they are designed and operated in alignment with institutional budgetary, research and regulatory requirements.

An individual must be clearly designated and authorized to oversee each Facility.

- While Facility Supervisors may report to a department head or faculty head for budgetary and human resource purposes, the Facility Supervisor must also report and be accountable to the Attending Veterinarian for animal health and welfare related matters.
- Facility Supervisors must be qualified, trained, and competent in their roles, and must receive continuing education to maintain competence.
- Facility Supervisors or their arms-length designates must be assigned responsibility for overseeing all spaces within the Animal Facility under their oversight, including PI-dedicated procedure rooms.

Within budgetary and operational constraints, senior administrators responsible for Facilities must provide support to Facility Supervisors in their efforts to accommodate research requirements: appropriate space, equipment, supplies and husbandry services within their animal facilities as per ACC-approved Animal Use Protocols (AUPs).

Those directly responsible for Facilities must ensure policies, processes, supplies and equipment, are in place to ensure risk mitigation for all users.

Requests for repurposing of vivarium space must undergo review and approval by the following representatives:

- Facility Supervisor
- Institutional Veterinarian
    - OMAFRA Inspector, as facilitated by the institutional veterinarian
- Animal Research Safety Consultant and associated institutional safety officers
- AECP Team

In conjunction with other subject experts, Standard Operating Procedures (SOPs) must be developed, maintained, and followed by Facility 'users.'

All SOPs developed and used must align with regulatory standards, and be reviewed, as per the *Development and Maintenance of Animal Care and Use Policies and Standard Operating Procedures*, ADM#500-*SOP Administration*, and other institutional policies and procedures.

- as is reasonable, SOPs relating to common operational elements must be centralized and standardized citywide

Facility users must receive appropriate training prior to obtaining access:

- Animal Ethics and animal user training, as per the *Institutional Animal User Training Program* Policy (POL-017);
- Facility-specific orientation; and
- As applicable to the role:
  - Species-specific animal health monitoring/husbandry
  - Area, containment, and equipment-specific hands-on training
  - Ergonomically sound practices
  - Institutional OH&S training requirements
  - SDS review for facility-specific hazards used within the facility
  - Other facility-specific SOPs

Facilities must:

- undertake research animal procurement in accordance with the *Research Animal Procurement Policy;*
- maintain animal records in accordance with the *Animal Care and Use Records Policy*
- undertake sick animal response in accordance with the *Sick Animal Response Policy and Procedures;*
- perform animal husbandry in accordance with the *Animal Husbandry Policy* and citywide species-specific husbandry SOPs; and
- follow the citywide *Housekeeping SOP.*

All animals within Facilities must be monitored by competent arms-length staff at minimum daily.

The ACC Executive must be regularly updated on activities associated with Facilities through submission of institutional reports.

As requested, individuals directly responsible for Facilities must participate in post-approval monitoring / Animal Welfare Assessment activities, and must be available to support the ACC, Institutional Veterinarians and external regulators during inspections, site visits and rounds as per POL-005 *Post Approval Monitoring Policy.*

Any concerns associated with Facilities must be communicated, as per policy POL-004 *Concerns Policy* and *Procedures*.

An institutionally supported and up-to-date Crisis Management Plan must be in place at all times.

- At Western, the *Crisis Management Program for Animal Holding and Procedure Areas* must be followed (ADM-SAF-501).

## References

Canadian Council on Animal Care. CCAC guidelines: Laboratory animal facilities — characteristics, design, and development, 2003

Animals for Research Act, R.S.O. 1990, Reg. 24: Research Facilities and Supply Facilities

Western University. Crisis Management Program for Animal Holding and Procedure Areas (ADM-SAF-501)

## Revision History

| Version | Date | Description of Changes | Authors |
|---|---|---|---|
| 00 | 19-01-2023 | New Policy | LT |
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# Glossary

**AECP Team –** The Animal Ethics & Care Program Team, chaired by the Associated Vice President (Research) and ACVS Director, consists of senior inter-institutional roles responsible for core AECP elements: AVPR, ACVS Director, Institutional Veterinarians, ACC Chair and Vice Chairs, Animal Research Safety Consultant, Office of the ACC, Institutional Facility Operations Managers (Western and Lawson). This team meets minimum monthly to review program requirements and initiatives; assesses requests for extra-vivarial spaces and changes to facility space; advises the VPR Working Group – AECP Resource Allocation & Planning, and assumes the role of AECP Crisis Response Team when required.

**Animal Ethics and Care Program (AECP)** – A comprehensive integrated program consisting of institutional structures, policies and processes focused upon ensuring regulatory alignment of Animal-Based Science activities that is centralized through Western's Vice President (Research) and Animal Care Committee (ACC).

**Facility Supervisor** – A trained, competent individual responsible for the oversight of a Laboratory Animal Facility who is arms-length (in principle and practice) from research activities and who is accountable to the Attending Veterinarian as regards animal health and welfare related matters.

**Laboratory Animal Facility** – An ACC approved vivarium that has been purpose-built in alignment with national and provincial regulations; is used to house – containment and animal husbandry activities - animals for at least 12 hours, or for the life of an animal, whichever is less; and is directly overseen by a Facility Supervisor.

**Extra-Vivarial Space** – Spaces used for Animal-Based Science activities that are external to a Laboratory Animal Facility, with the exception of the Field (see Field Studies).

**Animal Holding Area** – A space designated to house / hold animals for any length of time.

**Crisis Management Plan** – A document reviewed and approved by institutional stakeholders responsible for human and animal safety that outlines in detail the strategies designed to help Western's Research Community deal with a sudden and significant negative event associated with a Facility, or other areas associated with animal-based science.