

Policy: Non-Human Primate Environmental Enrichment

Policy Number: POL-012

Version Number: 00

Category: Operations

Subject: Minimum requirements for providing environmental enrichment to non-human primates involved in animal-based science.

Approving Authority: University Council on Animal Care

Responsible Office: Animal Care and Veterinary Services

Related Procedures:

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Effective Date: June 30, 2018

Revised:

Purpose

The purpose of this policy is to create a successful Environmental Enrichment (EE) Program to provide for the adequate psychosocial welfare of Non-Human Primates (NHPs) that is based on an understanding of species-appropriate behaviour, individual animals' medical and behavioural histories, experimental design, and accepted international standards.

Rationale

As a facility governed by the requirements and policies of the Canadian Council on Animal Care (CCAC), it is our responsibility to establish and maintain an enrichment program that provides for the welfare and well-being of experimental animals in accordance with 'CCAC policy statement on: social and behavioral requirements of experimental animals'.

This policy exists to outline the various environmental enrichment provision requirements to:

- encourage a repertoire and frequency of behaviours that matches their natural, normal behaviour in the wild, including being relaxed, alert, busy while displaying no fear towards trivial non-threatening stimuli,
- decrease stress to reduce research variables and benefit research results,
- give the animals a sense of control over their environment, and
- minimize boredom and undesirable behaviour (e.g. aggression, trauma, stereotypical behaviour, or obesity).

The CCAC states that, “*Captive non-human primates kept in bare cages without access to a continually changing array of manipulatable objects will rapidly come to suffer from sensory, motor, and intellectual deprivation. Lack of variation in the diet (e.g. one consisting largely or entirely of artificial biscuits), will compound these problems.*”¹

Scope

This policy applies to all NHPs housed within any Animal Holding Area and all personnel involved in NHP animal studies performed within Western’s Research Community.

Policy

NHPs must be consistently provided with environmental enrichment that aligns with national and provincial regulatory bodies and current veterinary standards.

NHPs must be consistently provided with a variety of essential stimuli including:

- Social Enrichment, to include specific provisions that address the social needs of NHPs that typically exist in social groups in nature and to involve physical contact and social interaction with members of the same species as well as humans;
- Sensory Enrichment, to include stimulation of all five senses: visual, auditory, tactile, olfactory, and gustatory:
 - Visual Stimuli – duration and quality of light, colours, motion, and the ability to control and enhance stimuli;
 - Auditory Stimuli – vocalization of other primates, environmental sounds, music and naturalistic sounds; mitigate background noise, e.g. HVAC;
 - Tactile Stimuli – natural and artificial materials; exposure to natural products/sources, including conspecifics, is preferred;
 - Olfactory Stimuli – provision of objects that provide the ability to scent mark their environment and novel artificial scents, if properly used; and
 - Gustatory Stimuli – ensuring a strong variety and taking into account species and individual taste preferences;

¹ Canadian Council on Animal Care. Guide to the Care and Use of Experimental Animals, vol.1, 2nd ed. (1993). Social and behavioural requirements of experimental animals. Retrieved from https://www.ccac.ca/Documents/Standards/Guidelines/Experimental_Animals_Vol1.pdf

- Structural Enrichment, to include opportunities to utilize a variety of structural elements, e.g. complex and alternating functional spacing, height variation in regards to the placement of items, and the provision of obstacles and visual barriers;
 - Dominance-related needs and behaviours must be taken into account when providing enrichment opportunities;
- Feeding Enrichment – provision of food while being cognizant to limit the risk of obesity; include providing a variety of food types, promoting foraging behaviours, the spatial distribution of items, and temporal distribution, e.g. a rotation to maintain novelty;
 - An Institutional Veterinarian must review and approve the introduction of new feed items; and
- Cognitive Enrichment – exposure to a variety of intellectual enrichment opportunities to promote and utilize dexterity, coordination, and cognitive abilities; provision of NHP toys/devices.

All exemptions to depart from essential stimuli provisions outlined within this policy must be pre-approved by the ACC within an Animal Use Protocol.

Enrichment devices must be consistently inspected to ensure only good quality devices are put into circulation; any devices that are no longer in good condition must be removed and sent for disposal.

Veterinary Technicians and Animal Care Technicians directly responsible for providing environmental enrichment must consistently demonstrate competence in undertaking related activities in a safe and effective manner.

Animal-specific detailed records of environmental enrichment activities must be maintained within the animal holding area, and be readily available to internal and external regulators as per the *Animal Care and Use Records Policy* (POL-003).

Any animal behavioural and/or welfare concerns associated directly or indirectly with the NHP environmental enrichment program must be promptly brought to the attention of the Institutional Veterinarian as per the *Sick Animal Response Policy* (POL-009) and *Procedures* (PROC-009).

The NHP Environmental Enrichment Program must be evaluated by Relevant NHP Stakeholders at regular intervals, and research conducted throughout the process to allow for introduction of new enrichment devices and methods.

Any Concerns with NHP environmental enrichment that cannot be readily resolved by accountable parties must be forwarded to the Animal Care Committee (ACC) Executive as per the *Concerns Identification, Project Refinement and Corrective Response Policy* (POL-004) and *Procedures* (PROC-004).

Roles and Responsibilities

Institutional Veterinarians are responsible to

- Actively contribute to the development, implementation and maintenance of an NHP Environmental Enrichment Program as outlined within this policy,
- Review policies and procedural documents related to the NHP Environmental Enrichment Program,
- Follow up on any reports of non-conformances and/or abnormal animal behaviour associated with the NHP EE program, as per the *Sick Animal Response Policy (POL-009)* and *Procedures (PROC-009)*
- Provide ongoing animal health professional support to NHP PIs, PI and Animal Care staff during the introduction of new or modified EE program elements.

Animal Care and Veterinary Technicians are responsible to

- Follow this policy,
- Seek support from an Institutional Veterinarian regarding NHP EE program elements during their introduction,
- Ensure NHP PIs and involved Animal Care staff are apprised of any intended changes to the EE program implementation, and
- Report any issues or non-conformances and any abnormal animal behaviour to an Institutional Veterinarian, as per the *Sick Animal Response Policy (POL-009)* and *Procedures (PROC-009)*, and the Animal Care Facility Supervisor responsible for the NHP animal holding area.

Animal Care Facility Supervisors are responsible to

- Actively contribute to the development, implementation and maintenance of an NHP Environmental Enrichment Program as outlined within this policy,
- Review policies and procedural documents related to the NHP Environmental Enrichment Program,
- Follow up on any reports of non-conformances by Animal Care staff, and
- Provide support to the Institutional Veterinarian in response to abnormal animal behaviour, as per the *Sick Animal Response Policy (POL-009)* and *Procedures (PROC-009)*.

Principal Investigators (PIs) and PI Staff are responsible to

- Actively contribute to the development, implementation and maintenance of an NHP Environmental Enrichment Program as outlined within this policy,
- Review policies and procedural documents related to the NHP Environmental Enrichment Program,
- Follow up on any reports of non-conformances by PI staff, and

- Involve an Institutional Veterinarian when responding to any abnormal animal behaviour as per the *Sick Animal Response Policy (POL-009)* and *Procedures (PROC-009)*.

References

MAPP 7.12 – Policy and Procedures for the Use of Animals in Research, Testing and Teaching

MAPP 7.15 – Post Approval Monitoring Program

MAPP 7.10 – Standardized Training in Animal Care and Use

University Council on Animal Care.

Animal Care and Use Records Policy (POL-003)

Sick Animal Response Policy (POL-009) and Procedures (PROC-009)

Concerns Identification, Project Refinement, and Corrective Response Policy (POL-004) and Procedures (PROC-004)

Canadian Council on Animal Care.

CCAC guidelines: Guide to the Care and Use of Experimental Animals, Volume 1, 2nd Edition

Environmental Enrichment for Non-Human Primates. H Tresz. Phoenix Zoo (2003).

Environmental Enrichment for NonHuman Primates Resource Guide. USDA, Series No.3 (June 2006).

P. Honess et al. The Enrichment Record. Winter 2012: Pages 17-20.

T. Poole. Universities Federation for Animal Welfare. Laboratory Animals. 31: 116-124 (1997).

Social and Behavioural Requirements of Experimental Animals in the *CCAC Guide to the Care and Use of Experimental Animals*, vol. 1, 2nd ed. (1993).

D. Platt and M. Novak. Videostimulation as enrichment for captive rhesus monkeys (*Mucaca mulatta*). Journal of Applied Animal Behaviour Science 52(1):139-155 (1997).

Revision History

Version	Date	Description of Changes	Author
00	05-30-18	New Policy	AEW, HCP, JM