FLORIDA ATLANTIC UNIVERSITY

Division of Research

SUBJECT:	**Effective Date:**	**Policy Number:**
Physical Restraint of Captive Animals	11/18/2022	10.4.14
	Supersedes:	**Page** **of**
	12/13/2019 12/15/2016 2/2005	**1** **4**
	Responsible Authorities:	
	Principal Investigator Vice President, Research Institutional Animal Care and Use Committee Assistant Vice President for Research, Research Integrity Assistant Vice President for Research, Comparative Medicine	

I. Background

The *Guide for the Care and Use of Laboratory Animals* (the *Guide*, NRC 2011) states: "Physical restraint is the use of manual or mechanical means to limit some or all of an animal's normal movement for the purpose of examination, collection of samples, drug administration, therapy, or experimental manipulation." The Guide distinguishes between short-term and prolonged physical restraint and AAALAC, International expects prolonged restraint being addressed in the institution's Program Description.

II. Purpose

This policy provides guidance to research personnel using physical restraint in conscious animals in their studies and defines what the IACUC considers as "prolonged" physical restraint. This policy does not apply to restraint for veterinary treatments, routine caging, handling and transportation.

III. General Statement

It is sometimes necessary to physically restrain animals for research. This can be necessary to achieve scientific objectives or to ensure the safety of the animal and human handler. Nevertheless, restraint can be stressful and has the potential to cause harm to the restrained animal under certain circumstances. Therefore, it is critical that considerable care and training be employed.

IV. Policy

A. Restraint devices are not to be considered normal methods of housing and must be justified in the IACUC protocol.

B. Alternatives to physical restraint should be considered whenever possible. Systems that do not limit an animal's ability to make normal postural adjustments (e.g., subcutaneous implantation of osmotic pumps in rodents) should be used when compatible with protocol objectives.
C. Prolonged restraint should be avoided unless it is essential for achieving research objectives. Justification for prolonged restraint and consideration of alternatives must be provided in the protocol or amendment and approval by the IACUC must be obtained before implementing such practices.
D. Restraint devices should not be used simply as a convenience in handling or managing animals. In some situations, chemical restraint (i.e., anesthesia) can be used as an alternative to physical restraint devices.
E. When restraint devices are used, they should be specifically designed to accomplish research goals that are impossible or impractical to accomplish by other means or to prevent injury to animals or personnel.
F. Restraint devices must be suitable in size, design, and operation to minimize discomfort, pain, distress, potential injury to the animal or research staff unless specifically used for induction of stress as justified in the IACUC protocol.
G. Personnel performing the restraint must be familiar with and be appropriately trained in using the equipment.
H. The period of restraint should be the minimum required to accomplish the research objectives.
I. Animals to be placed in restraint devices should be given training to adapt to the equipment and personnel. Many animals can be trained, through the use of positive reinforcement techniques, to cooperate with research procedures. Animals that fail to adapt to the restraint device might have to be removed from the study in consultation with the Attending Veterinarian or her designee.
J. Provisions should be made for the observation of the animal at appropriate intervals, as determined by the IACUC. Restrained animals should not be left unattended.
K. Veterinary care must be provided if lesions or illnesses associated with restraint are observed. The presence of lesions, illness, or severe behavioral change often necessitates the temporary or permanent removal of the animal from restraint.

V. Definitions

A. **Physical restraint** is defined as the use of manual or mechanical means to limit some or all of an animal's normal movement. In most research applications, animals are typically restrained for brief periods, usually minutes.
B. The term **Captive Animals** is defined for the purpose of this policy as any animal kept in an animal housing facility, both Comparative Medicine (CM) managed vivaria and PI managed satellite facilities. It can be either a typical laboratory animal species or a wildlife species.
C. **Chemical restraint** is defined as medical restraint induced by drugs such as anesthetics or sedatives and is not covered in this policy.
D. **Prolonged restraint** is variable based upon species, method of restraint used, equipment available for restraint and monitoring. Time periods are to be reviewed on an individual basis within the protocol.

VI. Accountability

The Principal Investigator (PI) will be responsible for:

- Describing all experimental procedures in the animal care and use protocol including prolonged physical restraint, considering the impact of the restraint on the

animals, measures to lessen the impact if possible, monitoring frequency and parameters determining the need to remove animals from restraining device(s).
- Assuring that personnel are appropriately trained on the specific equipment, procedures, and monitoring that laboratory staff clearly understand purpose and duration of restraint.
- Assure that research personnel follows the animal care and use protocol.
- Involving the AV or his/her designee in the design of the study pertaining to restraint procedures and whenever lesions or illnesses associated with restraint devices occur.
- Request exemptions from the Guide for the Care and Use of Laboratory Animals and this policy with the appropriate scientific justification in an animal care and use protocol (i.e., IACUC protocol) or amendment.

The IACUC will be responsible for:
- Reviewing and approving, requiring modifications in (to secure approval) or withholding approval of IACUC protocols and/or amendments, especially assess the justification for restraint, the appropriateness of monitoring frequency, parameters to remove animals from the study if not adaptable to the restraint device.
- Providing oversight for all animal procedures conducted.

The Research Integrity office will be responsible for:
- Administrative support of the IACUC members to facilitate their regulatory function
- Maintaining policy and assure regular review and update as necessary by the IACUC
- Include approved exemptions from the Guide in the report of the semi-annual site inspection and program review to the Institutional Official (IO).

The Attending Veterinarian and Office of Comparative Medicine (CM) will be responsible for:
- Veterinary review of IACUC protocol(s) and advice to PI on appropriate study design concerning restraint devices and providing veterinary care for sick animals.
- Providing support and training for all personnel including animal care staff regarding recognition of pain/distress in rodent species used in studies utilizing prolonged physical restraint.
- Daily observation of all animals housed in VS managed vivaria and notification of the AV or his/her designee and the research personnel whenever signs of pain/distress are observed in any of the animals under their care.

VII. Procedures

A. For the purposes of the animal use protocol the following do not require justification or description in the protocol:
    a. Brief physical restraint that is part of normal animal-handling practices (e.g., moving mice from one cage to another during weaning or to behavioral equipment).
    b. Brief manual restraint for procedures such as substance administration or sample collection (e.g., restraint of an animal to draw a blood sample).

B. For prolonged restraint purposes for experimental procedures in the vivarium or laboratory, the protocol must include:
    a. Description of the restraint device

b. Amount of time the animal will be restrained
c. Description how the animal will be acclimated to the restraining device, if applicable
d. Description of how the animal will be observed during the procedure requiring restraint
e. If the duration of prolonged restraint limits the ability of the animal to access food and water, the protocol must also include a description of when food and water will be given (this depends on species and length of restraint)
f. How body weight will be monitored if restraint is planned for more than one time
g. How hydration status will be monitored depending on the length of restraint

C. Recordkeeping
a. Investigators must maintain records on all experimental procedures performed including prolonged physical restraint.
b. Records should reflect acclimation periods, exclusion of animals from prolonged restraint if not adaptable, monitoring during prolonged restraint and assessing certain parameters of well-being (e.g., weight) if applicable.

VIII. Policy Renewal Date
11/18/2025

IX. References
1. Institute for Laboratory Animal Research, National Research Council. 2011. The Guide for the Care and Use of Laboratory Animals, 8th edition. Washington, DC: National Academies Press.
2. National Research Council. 2003. Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research. Washington, DC: National Academies Press.

POLICY APPROVAL

Initiating Authority: Vice President for Research and Institutional Official

Signature_____ Date: _____

Name: Daniel C. Flynn, Ph.D., Vice President for Research

Executed signature pages are available in the Initiating Authority Office(s)