

Title: Animal Transportation Guidelines, IACUC Administrative Policy P-0017-01	
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Authorized by: Institutional Animal Care & Use Committee	
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I. PURPOSE

- A. Transportation of research or teaching animals within or between campus buildings is an essential component of the research enterprise. The integrity and wellbeing of the animals being transported are necessary for the quality of the research and the welfare of the animals. It is important to maintain the animals' health status by avoiding exposure to potential pathogens, preventing injury, and reducing stressors such as temperature extremes, odors, excessive noise, and confrontations with other animals. Transporting research animals requires heightened attention to detail to ensure safety and wellbeing for the animals as well as personnel in areas where the animals must pass. Human health concerns include allergies of animal origin, injury from escaped animals, and exposure to hazards such as microorganisms, chemicals, or radioactive materials.
- B. The *Guide for the Care and Use of Laboratory Animals* states that animal transportation "should provide an appropriate level of animal biosecurity ... while minimizing zoonotic risks, protecting against environmental extremes, avoiding overcrowding, providing for the animals' physical, physiologic, or behavioral needs and comfort, and protecting the animals and personnel from physical trauma." This document will expand upon these principles for the investigators and laboratory and technical staff at the Central Michigan University.

II. PROCEDURES

- A. All methods of transporting animals must provide for the health and welfare of animals.
- B. Transportation of animals must be done in a direct and timely manner, avoiding public areas as much as possible. In selecting the route, care should be taken to utilize the least congested areas whenever possible.
- C. Animals must not be transported with any other animal, substance, or device that may potentially cause injury to the animal being transported.
- D. Enclosures containing animals must be secure and carefully handled. The enclosures must be maintained in a manner that will prevent them from tipping or falling and must be handled in a manner that will minimize any physical trauma or distress to the animals.
- E. All adult livestock species, all Old World monkeys, and all animals that require more than one person to restrain/carry (larger than 35 pounds) must be transported in official vehicles with sanitizable cargo areas. Other species can be transported in "unofficial" vehicles, but this practice is highly discouraged (see Section V. Special Instructions).

- F. For aquatic species and amphibians, special considerations are required for transportation in an aqueous or sufficiently moist environment, and special attention should be given to maintaining appropriate levels of dissolved oxygen and avoiding temperature extremes for poikilotherms.
- G. Temperature extremes must be avoided when animals are transported. While the caging will insulate animals, exposure to extreme ambient temperatures can have adverse effects. When temperatures fall below 40°F (4.4°C) or above 85°F (29.4°C), special precautions, such as a delay in transport, may need to be taken to ensure temperatures are maintained consistent with the requirements of The Guide (see p43-45 and p80-81).
- H. The USDA regulations must be followed when transporting animal species covered under the Animal Welfare Act (AWA). These animals include: dogs, cats, non-human primates, calves, sheep, goats, pigs, rabbits, guinea pigs, hamsters, and other mammals not specifically excluded (exclusions are laboratory mice, rats and birds). Transportation of animals must also comply with the applicable local and state laws, regulations and the CMU Assurance.
- I. Transport animals in covered or opaque cages, carriers, or containers. These primary enclosures must be constructed of materials that can either be sanitized or disposed of, and must be designed to prevent the spread of fomites, microorganisms, chemicals, or radioactive materials where indicated. The containers must:
1. Be escape proof (secondary enclosures such as Rubbermaid containers with tight fitting lids, for example). There must be a means to prevent unintended opening such as a latch or locking mechanism or a box-within-a-box. This applies to transport within hallways as well as between buildings. Carts must be used to avoid dropping containers.
 2. Provide adequate ventilation (Note: impermeable containers or trash bags/shrink wrap without air holes does not provide adequate ventilation)
 3. Provide food and a source of water if rodents will be held within the transport container for longer than 4 hours.
 4. Use the same density requirements for general animal housing as described in the Guide for the Care and Use of Laboratory Animals.
 5. Containers must be sanitizable or disposable to prevent possible cross-contaminations between animals of differing health status.
 6. Protect the transporter from exposure to animal contact during transit.
- J. Clean and disinfect cargo areas of vehicles used in the transportation of animals as needed to prevent contamination of future animal deliveries.
1. Sanitation of the interior of the truck can occur either after transporting the contaminated animals/equipment or prior to transporting the next shipment of animals/equipment.
 2. Sanitation of the vehicle includes the interior floor and lower walls or any surface that could be in contact with the animals or equipment using an appropriate disinfectant.
 3. When transporting in a personal vehicle the use of a sanitizable rubber mat or tarp is recommended.

- K. Investigators may apply for an exception with the IACUC office for the transportation, receipt and shipment of animals if they have requirements that differ from these guidelines.

III. PERSONAL PROTECTIVE EQUIPMENT (PPE) DURING ANIMAL TRANSPORT

- A. When transporting animals, wear appropriate PPE as described by OLFS. The appropriate use of PPE reduces the risk of pathogen contamination of either animals or people through contact or aerosolization.
1. Dispose of PPE appropriately to prevent creation of fomites for transmitting pathogens.
 - a) For example, if PPE is worn while disinfecting incoming shipping containers, the PPE should be disposed of before moving on to other tasks.
 - b) In most cases PPE should be disposed of prior to exiting the animal facility and donned prior to re-entering an animal facility.
 - c) PPE generally will not be needed during transport provided that section II.I.1-6 has been carefully followed.

IV. SPECIES SPECIFIC INSTRUCTIONS

A. Rodents

1. SPF Rodents

- a) Required PPE for transport from animal rooms: As posted outside room, see the "Protective Clothing Chart", otherwise refer to the Minimum PPE for Animal Care and Use policy. **Note: PPE, except a single glove to touch the transport cart, will not be needed if the animals are SPF, in micro-isolation cages, and covered for transport.**
- b) Transport SPF rodents in a micro-isolation style cage (one with a filtered top). Reverse the position of the water bottle to avoid flooding. **If a filter top cage is not available a surgical drape, clean lab coat or other cover must be placed over the top of cages in transport and the entire time they are in the corridor (e.g. HP testing wing).**
- c) Upon return to a housing area, transfer the rodents to a clean cage with the water bottle correctly placed, with the sipper tube seated correctly through the grommet and the wire bars.
- d) Do not return the transport cage to the housing rack. Bring it to the soiled side of the cage wash facility for sanitation.
- e) For animals inoculated with infectious or chemical hazards, transfer the animals to a clean transport cage while in the room. Leave the dirty cage within the housing room. See the Animal Hazard Notification/Control Form for specific instructions.

2. Conventionally Housed Rodents

- a) Required PPE for transport from animal rooms: As posted outside the room, see the "Protective Clothing Chart", otherwise refer to the Minimal PPE policy.
- b) Transport rodents in a clean cage. Reverse the position of the water bottle to avoid flooding.
- c) Upon return to a housing area, transfer the rodents to a clean cage with the water bottle correctly placed, with the sipper tube seated correctly through the grommet and the wire bars.

- d) Do not return the transport cage to the rack. Bring it to the soiled side of the cage wash facility for sanitation.

B. Aquatic Species

1. Required PPE for transport from animal rooms: None, unless posted otherwise.
2. Be sure that the transporting environment is appropriate for the species –fish need to be transported in water, aquatic frogs need to be transported in water or in such a way that they do not suffer respiratory difficulty during transport.

C. Birds

1. Providing there is adequate ventilation, pigeons and doves may be transported for short distances in wicker baskets or cardboard boxes.
2. It is not advisable to provide water continuously as plumage may become damaged.
3. After 1-2h birds should be given food and water.

V. SPECIAL INSTRUCTIONS REGARDING MOVEMENT OF ANIMALS OFF-CAMPUS. The IACUC Recommends not allowing passengers during transport should an investigator choose to use a personal vehicle to transport animals to reduce the chance of exposure.

- A.** The PI is responsible for the transport of animals from the CMU campus to other locations, be it an intra-state, interstate, or international destination. When animals are moved to off-campus locations, the containers must be labeled “Live Animals.” Containers must meet applicable laws and standards, e.g., those from the International Air Transport Association (IATA) at www.iata.org or the Animal Welfare Act, as appropriate.
- B.** Transportation of animals in vehicles not specifically designated for such purposes (e.g., personal cars) is **highly discouraged**. If transportation in such vehicles is necessary, the following additional requirements must be met
 1. Any PI who has plans for transport in such vehicles must have a complete description of this method in their approved IACUC application.
 2. Consultation with Risk Management at (989) 774-3748 prior to considering transport in a personal vehicle is strongly encouraged.
 3. PI must obtain an IACUC “Vehicle Inspection Form” and the vehicle must be inspected and the form must be signed by an IACUC member, as designated by the committee, or other designated qualified individual as assigned by the IACUC.
 4. Animals to be transported must have veterinary approved health certificates as required by each State through which the animals will transit.
 5. All shipments must be in escape-proof primary enclosures, which must provide adequate ventilation and be sanitized after use.
 6. All primary enclosures must be placed in the vehicle on, or in, waterproof materials/containers that can be either immediately discarded or immediately disinfected upon completion of the shipment. Such materials will protect the vehicle from contamination by animal-based fluids. These containers must not inhibit proper ventilation.
 7. All shipments must be quarantined in some fashion upon arrival at the destination so as not to be a risk to other animals in the facility. PI must obtain facility manager and

veterinary approval prior to transport to ensure that adequate housing facilities can be provided.

8. Live animal shipments cannot be placed in the trunk, or another non-ventilated enclosed space, of such a vehicle. The animals must be able to receive the benefit of the climate control systems available in the vehicle.

VI. SPECIAL INSTRUCTIONS REGARDING ANIMALS WITH EXPERIMENTAL HAZARDS

- A. Transporting live or dead animals containing radioactive isotopes:
 1. Any time an authorized radionuclide user treats an animal with radioactive material they must follow the policies found in the CMU Radiation Safety Manual. Researchers wishing to administer radioactive material to any animal must file an Application and have it approved by the Radiation Safety Committee before initiating any research project work. PIs must also have an approved "Animal Hazard Notification/Control Form" on file with OLFS and the facility manager.
 2. Animals that have received radioactive material must be transported in such a manner as to prevent any contamination of hallways, elevators, etc. Solid bottom transfer containers are MANDATORY. Contact The Office of Laboratory and Field Safety (OLFS) prior to transportation of such animals across public streets or sidewalks for specific guidance.
 3. Enclosures used to transport live animals must be properly identified. Each animal cage must bear a cage card with the Authorized User / Investigator's name, radionuclide used, activity (micro curie or mill curie) administered, and the date of administration. Animal carcasses and pathological waste must be packaged in strong, leak-proof plastic bags provided by OLFS, and sealed with 'Caution Radioactive Material' labeling tape. Bags must be labeled with the Authorized User / Investigator's name, radionuclide(s), total collected activity, and date. Leave these bags in a designated radioactive animal freezer for your area / building. Contact **OLFS for collection and disposal of all forms of radioactive waste.**
- B. Transporting animals treated with pathogens or carcinogenic material:
 1. The IACUC, IBC and OLFS are responsible for reviewing animal study proposals for research with animals, including work with hazardous infectious materials, toxins or chemical substances. The transportation of animals that are to be dosed at one location and moved to another needs to be particularly evaluated to assure that proper containment is used to minimize occupational exposure to persons involved with the move, and to minimize environmental contamination. Investigators planning to transport live animals that were previously administered an infectious, toxic or chemical substance must undergo a risk assessment prior to transfer. PIs must have an approved "Animal Hazard Notification/Control Form" on file with OLFS and the facility manager.
- C. Small laboratory animals that have undergone a risk assessment at the time of protocol review and are determined to require containment housing must be transported in contained caging systems. Use secondary containment with a tight fitting lid and do not hand carry. The attending veterinarian in consultation with OLFS will evaluate transportation for larger animal species on an individual basis.
- D. Warning labels are required on enclosures used to transport live or dead animals that have been exposed to chemical or biological hazards. The specific hazard must be identified.

- E. Carcasses of contaminated animals must be handled according to the Animal Hazard Notification/Control Form on file with OLFS.
- F. Use double bags to transport carcasses of small animals (and carcass barrels if available to transport larger species) for disposal. It is good practice to double bag larger animals within a carcass barrel for additional containment purposes. Consult ANIMALCARE@cmich.edu or the facility supervisor for the specific animal facility or OLFS for more specific information about carcass disposal.
- G. Disinfection - When any body fluids (blood, urine, saliva, mucus), feces, or dirty bedding contacts any surface outside the cage, it must immediately be removed and the area disinfected with an appropriate disinfectant, e.g., 10% bleach, Spor-Klenz or Clidox®-S. Additional deactivation may be necessary, depending upon the type of infectious, toxic or chemical hazard present.

VII. HANDWASHING

Washing of hands following transport of a live animal or carcass is an important step for prevention of the spread of infectious organisms or other contaminants to both personnel and animals. While the use of exam gloves will greatly decrease the spread of contaminants from a person's hands, they will not completely eliminate this transfer due to micro-breaks in glove materials, regardless of type (latex, vinyl or nitrile). For effective hand washing, antimicrobial soaps or alcohol-based hand rubs (60-95% alcohol) are recommended for use. See OLFS for training on proper hand washing procedures.

VIII. REFERENCES

- Committee on Guidelines for the Humane Transportation of Laboratory Animals, N.R.C. Guidelines for the Humane Transportation of Research Animals. The National Academies Press, Washington, D.C. 2006 (Pre-publication copy)
- Cornell University. Cornell Center for Animal Resources and Education. (IACUC approved)
- Duke University Animal Transport (Non-Patient Care Areas) – Policy for Animal Transport Around Campus. Revised 9/27/2012.
- ILAR. 1996. Guide for the Care and Use of Laboratory Animals.
- National Institutes of Health Animal Transportation Guidelines.
- Report of the Transport Working Group established by the Laboratory Animal Science Association (LASA). Guidance on the transport of laboratory animals, Laboratory Animals, 39: 1-39, 2005.
- Texas A&M University. Office of the Vice President for Research. Transporting Animals.
- University of Michigan. University Committee on the Use and Care of Animals. Protective Clothing for Animal Care and Use. Revised 10/7/2010
- University of Pennsylvania. The Office of Regulatory Affairs. Transportation of Laboratory Animals – Philadelphia Campus. Revised 6/20/2005.

IX. *RELATED DOCUMENTS

- Minimum PPE for Animal Care and Use Personnel/Protective Clothing Chart – IACUC/OLFS (In progress)
- Anesthesia and Sedation Monitoring Guidelines
- Animal Hazard Notification/Control Form

VEHICLE INSPECTION
INITIAL OR SEMIANNUAL RE-ASSESSMENT

PROTOCOL INFORMATION

PD Name: _____ IACUC Approval #: _____
 Species: _____ Max. No. of Animals Transported in One Trip: _____
 Frequency of Transport / No. of Anticipated Trips: _____
 Pick-up Location: _____
 Drop-off Location: _____
 Anticipated Distance of Transit: _____
 Estimated Tim of Transit (hours): _____

VEHICLE INFORMATION

Vehicle Owner: _____ Make: _____
 Model: _____ Year: _____ Color: _____
 License Plate (State / Number): _____

TRANSPORT CONDITIONS

Provide a brief description of each applicable item

<input type="checkbox"/> NO	<input type="checkbox"/> YES	Secondary Container?	
<input type="checkbox"/> NO	<input type="checkbox"/> YES	*Sanitizable Surfaces?	
<input type="checkbox"/> NO	<input type="checkbox"/> YES	Spills Containable?	
<input type="checkbox"/> NO	<input type="checkbox"/> YES	Protection from Sun?	
<input type="checkbox"/> NO	<input type="checkbox"/> YES	Protection from Public Observation?	
<input type="checkbox"/> NO	<input type="checkbox"/> YES	Container Secured to Vehicle?	
<input type="checkbox"/> NO	<input type="checkbox"/> YES	Climate Controlled During Transit?	
<input type="checkbox"/> NO	<input type="checkbox"/> YES	Bedding, Water, Feed During Transit?	

*Examples of sanitizable surfaces in personal vehicles may include rubber mats or tarps.

Provide a brief description of any transportation processes not already described above. Enter 'None' if all processes are described above.

STIPULATIONS AND CONDITIONS FOR THE TRANSPORT OF ANIMALS

The Vehicle Owner/Transporter assures the IACUC that they shall:

- Accept responsibility for the animal provisions of care and minimization of distress from the time of pick-up until the time of delivery.
- Minimize transport time.
- Use practices that minimize the risk of exposure to animal allergens.
- Use practices that minimize the risk of zoonotic disease transmission.
- Protect animals from environmental extremes.
- Avoid overcrowding.
- Provide food and water when indicated.
- Protect against physical trauma.

Confirm the following statements:

- YES 1. I agree to report to the IACUC any adverse or unanticipated event which occurs during transit.
- YES 2. I confirm the accuracy of the descriptions noted in this document.
- YES 3. I agree to abide by the requirements of this document, and if changes are necessary, I shall file an amendment with the CMU IACUC prior to initiating the new procedures.

Signature of Vehicle Owner/Transporter _____ Date

Signature of CMU IACUC Member _____ Date

Printed name of IACUC Member: _____

OFFICE USE ONLY

This vehicle is approved for animal transport starting on the date below for a period of 6 months:

Additional Notes / Comments:
