

Guidelines for NIH Non-Rodent Transportation

Overview: Transportation of laboratory animals is necessary for research and must conform to high standards to ensure animal health and welfare during transit.^{1,2} This guideline applies to vertebrate animal within an NIH Institute program and includes mammals (excluding rodents; see [Guideline for NIH Rodent Transportation](#)) and aquatic species (fish/amphibians).

General:

- 1) The Institute/Center (IC) Animal Program Director (APD), or their designee, is responsible for the oversight of non-rodent transportation within their program and assurance that all transportation is handled in accordance with all applicable laws, policies, and guidelines.^{3,4} This includes obtaining transportation approval before animals are moved and requesting confirmation of their arrival.
 - a) The IC APD or their designee serves as the primary source of information relating to the approval of transport enclosures, means of transport, receipt, and shipment of animals within their IC and can grant exceptions to these guidelines when it is considered in the best interest of the animal(s).
 - b) The IC Animal Care and Use Committee (ACUC), with the Office of Animal Care and Use (OACU) as a resource will resolve conflicts regarding animal transportation.
- 2) All methods of transporting NIH animals must provide for the health and welfare of the animals.
- 3) Transportation of animals shall be done in a direct and timely manner, that avoids public areas and areas primarily used by NIH employees and patients.
- 4) Animals shall not be transported with any other animal, substance, or device that may be expected to be injurious to their health or welfare.
- 5) Care shall be exercised in handling enclosures used to transport live animals. They shall not be tossed, dropped, or stacked in a manner that may reasonably be expected to result in their falling. During transport, enclosures should not be carried in any way that may cause physical trauma or stress to the animal(s).
- 6) Temperature extremes are to be avoided when animals are transported, and special precautions or postponements are required when ambient temperatures are below 45 degrees Fahrenheit or above 85 degrees Fahrenheit and may jeopardize the welfare of the animals. Veterinarian certifications of acclimation to lower temperatures is required for shipment outside minimum temperature range and should specify the minimal temperature to which animals are acclimated.
- 7) The Animal Welfare Act Regulations (AWARs) shall be followed in transporting regulated laboratory animals in intra- or interstate commerce.
- 8) Transportation of animals must comply with applicable state and local laws and regulations.
- 9) It is essential that a shipping crate or transport enclosure be used in the transportation of animals. Enclosures must be escape proof, properly labeled, provide adequate ventilation, sanitized or disposed of after use, and prevent the spread of pathogenic microorganisms, chemicals or radioactive materials where indicated. The enclosures should be opaque or shielded in such a way as to be non-stressful to the animals. Additional secondary containment is necessary for some aquatic species.
- 10) Cargo areas of vehicles used in the transportation of animals shall be temperature-controlled,

clean and decontaminated as necessary to prevent contamination of future animal deliveries.

- 11) The Division of Veterinary Resources (DVR) provides a central [Animal Transportation Service](#) for NIH with environmentally controlled trucks and trained drivers. Individual ICs may also have their own approved transport vehicles and each IC ACUC is required to inspect their vehicle(s) during the semi-annual program evaluation.
 - a) DVR is available, as needed, for the delivery of all species of animals on the NIH Bethesda campus and locally. Call or submit a request to DVR to determine the shipment locality. DVR is required for transporting all local non-rodent species off the NIH Bethesda campus unless another acceptable method is justified and approved by the IC Veterinarian(s).
 - b) It is DVR policy that animals are mentally alert and fully mobile during transportation. If animals need to be sedated or anesthetized during transportation, they will require continuous monitoring during transportation in DVR vehicles.
- 12) ICs may develop specific procedures for the transportation, receipt, and shipment of animals if they have requirements that differ from these guidelines. The responsibility for development and approval of these specific IC procedures lies with the IC Scientific Director (SD), following recommendations of the IC ACUC and APD. A dated copy of the IC specific guidelines shall be forwarded to the NIH OACU.
- 13) It is recommended that standard operating procedures (SOPs) be developed and approved for the transportation of Nonhuman Primates (NHPs) and other non-rodent species. SOPs should address the transport enclosure, means of transport, receipt, and shipment of animals, as well as the monitoring of animals during transport. Appropriate records must be maintained for the sanitation and decontamination of transport vehicles.

Movement of Animals Within an NIH Building:

- 1) Occupants of the building should be protected from allergens of animal origin, microorganisms, chemicals, radioactive materials and escaped animals. Consider: "Building personnel should be protected against animal-borne hazards which may include allergens of animal origin, infectious microorganisms, chemicals, radioactive materials, and escaped animals."
- 2) Movement of animals inside the animal facility is usually accomplished with the use of a transport cage for non-rodent species. The appropriate conveyance should be verified with the Facility Manager or Facility Veterinarian and follow the animal facility's SOP.
- 3) Movement of non-aquatic animals from the animal facility to a laboratory within the same building usually requires the use of a primary container as described above in 9. The appropriate conveyance should be verified with the Facility Manager or Facility Veterinarian.
- 4) For movement of animals within the NIH Clinical Center (Building 10) and the Clinical Research Center (CRC) see [Research Animal Transport for the NIH Clinical Center](#). This policy addresses the correct method of movement within the Clinical Center, including the use of the appropriate elevators.

Delivery of Animals to Locations Outside NIH:

- 1) Health Certificate - For non-rodent animals being shipped from Maryland to another state or country, a United States Department of Agriculture/Animal Plant Health Inspection Service Certificate of Veterinary Inspection is required. The appropriate form (i.e., interstate vs. international, species appropriate, must be signed by a USDA accredited veterinarian within 30 days of shipment and accompany the animals.

- 2) Other – Transfers of NHP to/from NIH are coordinated by a designated person at each IC. Any other arrangements that are made for transporting animals outside of NIH must meet requirements of the AWARs and be approved by the IC Veterinarian(s). An [Animal Transfer Agreement](#) or [Material Transfer Agreement for the Transfer of Organisms](#) may be needed when transferring government-owned animals to a non-government research facility. Contact the [IC Technology Development Coordinator](#) for guidance.

Transporting Live or Dead Animals Containing Radioactive Isotopes:

- 1) Investigators planning to transport live animals containing radioactive materials from one location to another must contact the [Division of Radiation Safety](#) (301-496-5774) for specific guidance, unless the two locations are within the same building.
- 2) A radiation safety protocol is required for the use of any amount of radioactive material in large animals (dogs, sheep, monkeys, etc.) and for the use of large amounts of radioactive material in small animals. Special transportation requirements must be addressed in such protocols.
- 3) Warning labels are required on enclosures used to transport live or dead animals that contain radioactive materials. Minimum label requirements include a “Caution—Radioactive Material” label and identification of the specific hazard.

Transporting Animals Treated with Hazardous Agents:

- 1) NIH Policy Manual [3040-2 Animal Care and Use in the Intramural Program](#) requires that an IC ACUC review animal study proposals for research with animals, including work with biological or chemical hazards. The transportation of animals that are to be dosed at one location and moved to another, require proper containment to minimize occupational exposure to persons involved with the move, and to minimize environmental contamination. The [Occupational Safety and Health Specialist](#) (301-496- 2346) must be consulted.
- 2) Laboratory animals that have been exposed to human pathogens or toxic/carcinogenic substances and are actively shedding the hazardous material must be transported in closed systems. The IC Veterinarian, in consultation with the [Occupational Safety and Health Specialist](#), should evaluate on a case-by-case basis transportation needs for larger animals so exposed.
- 3) 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.
- 4) Carcasses of contaminated animals must be handled according to the guidelines of the [Division of Environmental Protection, Office of Research Facilities](#) (301-496-3537) for handling as Medical Pathological Waste or for disposal as chemical waste. Contaminated animal carcasses that are being transported for pathological examination need to be placed in double plastic bags (primary barrier) and then into a cardboard box (secondary barrier) and must be accompanied by a detailed history of the type and amount of hazardous material.

Transport of Aquatic Species Between Buildings on the NIH Bethesda Campus or to Locations Outside NIH:

- 1) Both primary and secondary containment are required when primary housing contains aquarium water.
- 2) Secondary containment must be impermeable in the event that the primary transport leaks.

References:

1. Swallow, J. et al. Guidance on the transport of laboratory animals. *Laboratory animals* 39, 1-39, doi:10.1258/0023677052886493 (2005).
2. National Research Council Committee on Guidelines for the Humane Transportation of Laboratory Animals in *Guidelines for the Humane Transportation of Research Animals* (National Academies Press, National Academy of Sciences, 2006)
3. USDA Animal Care (2017).
4. National Research Council, *Guide for the Care and Use of Laboratory Animals: Eighth Edition.* (The National Academies Press, 2011).
5. [NIH PM-3035 - Working Safely with Hazardous Biological Materials](#)
6. [NIH PM-1340-1 - Permits for Import or Export of Biological Materials](#)

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