

DISC
AA-048F
AA-048H

**3T Magnetic Resonance Research
Laboratory**
Diagnostic Imaging Sciences Center
University of Washington Medical Center Box 357115,
206-685- 313 8 1959 NE Pacific, Seattle, WA 9819 5

SOP
ANIMALS
BSL-2

MANUAL OF STANDARD OPERATIONAL PROCEDURES

Transportation of Animals Between BioSafety Level 2 (BSL-2) Facility Housing Areas and Diagnostic Imaging Sciences Center (DISC) and Working with Animals at DISC.

I. Introduction/Purpose:

Guidelines and instructions for transfer of animals between Centralized or Decentralized Animal BioSafety Level 2 (BSL -2) housing facilities and the Diagnostic Imaging Sciences Center (DISC) and working with those animals at DISC. Biosafety Level 1 housing facilities are designed for animals which have had no known contact with any risk agents associated with human disease.

Biosafety Level 2 housing facilities are designed for animals which have had contact with any moderate-risk agents associated with human disease of varying severity. Potentially hazardous agents could be chemical, radioactive, viral vectors, bacteria or other infectious agents, human tumors, or in some cases, the animal itself. The PI/Investigative group is responsible for submitting a Research Project Hazard Assessment (RPHA) form (<http://www.ehs.washington.edu/rbsresplan/rpha.shtm>) and receiving approval for their research by the UW EH&S, Research and Biological Safety Office. EHS project approval must be updated to include the MRI facility at DISC prior to transfer of animals (contact RBS office at 206 221 7770). Research approval letter and all related RPHA appendix A's must be submitted with PAF to DISC operations committee prior to consideration.

The MR Research Lab provides a full range of noninvasive imaging services for anatomical, functional, tissue and molecular applications. The DISC is designed for magnetic resonance imaging only and **not** for any surgical procedures. The PI/Investigative group must submit a Project Application Form (PAF) for animal studies for their project and this must be approved by the Project Review Committee before any MR studies can be done. PAF forms can be downloaded from our website: <http://depts.washington.edu/mrlab/>.

II. Facilities:

A. Centralized Housing

There are nine Centralized Housing Facilities: Health Science Building 6th floor, T-wing, I-wing and K-wing facilities, Harborview Research and Training Building Vivarium, Roosevelt, CHDD, 815 Mercer Building and Foege Building.

B. Decentralized Housing

There are several locations that house or receive Decentralized animals: numerous Health Science Building labs, Guthrie Hall, Hitchcock Hall, Kincaid Hall, Harborview Research and Training basement level.

C. Transportation between Centralized and Decentralized Facilities

Transportation between Centralized and Decentralized Facilities can become a method for spreading disease. Biosafety Level 2 animals require use of a HEPA filtered transporter to and from the DISC. A biosafety officer approved transporter will be supplied by comparative medicine for animals housed in centralized facilities.

Decentralized facilities must obtain approval of their transporter from a biosafety officer prior to use. Therefore, there must always be an approval for transferring animals in these cases. This can be a standing approval, in the case of lab space which has been approved for use by IACUC and Rodent Health Monitoring Group. For one time transfers, an Interfacility Animal Transfer request must be submitted to Rodent Health Monitoring via Animal Purchasing to gain transfer approval. Additionally, in the case of transfers between different investigative groups, you will also need to submit the same form to Animal Purchasing at 206-543-0640, fax 206-543-7706, email: animals@u.washington.edu.

D. Policies and Protocols

Per UW IACUC policy, all decentralized facility housing, or procedure/lab space that is being utilized, must have prior approval and be listed in the active animal protocol. Specifically, when working at the 3T MR Research lab, Primary Investigators should specify AA048F as the imaging location and AA048H as the animal preparation area on their protocols. Any staff/PI/support personnel potentially entering the DISC must complete appropriate level MR safety training and screening prior to scheduling scans and adhere to the "Guidelines for Safe Operation and Conduct In the DISC MR Research Laboratory".

III. Transfer Procedures:

1. Animals leaving for approved imaging procedures and then return to their approved housing room must be transported in either their housing cage with the MI filtration top secured, or an approved SPF filtration crate which must be autoclaved. The cage or crate must then be placed inside of an approved HEPA filtered transporter (see section IIC). The supervisors of the animal housing facilities should ensure the cage /crate, and HEPA filtered transporter have been autoclaved and/or are in working order, e.g. seals secure and the snaps are not broken. The return of animals to a housing room must be approved in advance by Rodent Health Monitoring and the facility supervisor. This can be arranged via the Interfacility Animal Transfer request form.
2. All transporters must be draped at all times during transportation
3. Transporting animals from BSL-2 housing room to DISC:
Follow procedures specified for that housing facility.

4. Transporting animals from DISC back to BSL-2 housing room.
Contact the individual animal facility supervisor for transportation/return procedures.
5. Entry requirements for ABSL-2 labs may vary. Always refer to the ABSL-2 biohazard door sign for specific PPE requirements.
5. The DISC cannot be used for housing of animals before or after MRI studies. PIs must arrange housing for their animals in advance, via the Interfacility Animal Transfer Request form, if the animals are scheduled to be scanned serially at DISC.
6. Any equipment brought into the DISC by the PI's team or veterinary staff must be checked by DISC personnel for MR safety.

IV. Isolation Animal and Human Scanning Procedures:

1. Non-primate animal MR studies can be done during regular office hours (9am-5pm) only if there are no human studies scheduled on the same day. Animal MRI can be done outside of regular office hours if there are human studies on the same day or as the first or last case with prior approval from the lab manager. Time gap between human and animal studies should be at least 1 hour for all disinfection procedures to be completed. Interleaving of animal studies with human scans is not permitted. See animal scheduling policies for details:
<https://depts.washington.edu/mrlab/research/researcher/scheduling.shtml#policies>
2. Animals should be scanned according to IACUC approved protocol.
3. A biohazard sign must be posted on the door while working with animals BSL-2.
4. For all large non-rodent mammals a UW Primate Center Veterinarian or UW Comparative Medicine Veterinarian must be present to monitor anesthesia.
5. All surfaces that may come into contact with animal equipment or the animal itself must be covered in plastic or chucks (disposable material). Chucks are taped to the table (to avoid from being moved) and taped on the floor when any animal equipment is placed on the floor.
6. Line induction chamber with blue pad. Replace blue pad in induction chamber with another new pad for preparation of next animal.
7. All animal coils and other devices for animal imaging must be labeled "For animal use only". Those devices must be stored in a separate enclosure and completely sealed with plastic. If human coils are used for animal imaging the coils and cables must be covered in plastic as well. Every effort should be made to avoid contamination of all parts of human coils. Plastic cover should be removed at the end of the procedure and the coil, scanner and lab is then cleaned per the DISC Animal SOP (see sect. VI Disinfection Procedures).

8. Any equipment brought into the DISC by the PI's team or veterinary staff is assumed to be contaminated and a work area is designated and prepared with vapor barrier. All vapor barrier materials are disposed of as biohazards.
9. Any equipment brought into the DISC by the PI's team or veterinary staff must be approved by DISC personnel for MR safety.

V. Personal Protection Procedures:

1. Personnel handling the animals are required to have an annual health screening by EH&S occupational health.
2. Personal protection equipment (PPE) for DISC personnel handling the animals must always include the following: eye protection, surgical mask, gloves, booties, and lab coat with cinched cuffs. Refer to the EHS approved RPHA appendix A for additional animal specific requirements. Gloves should be changed frequently, particularly between animals from separate cages. Gloves must be removed prior to touching any common used items such as doorknobs, keyboards or telephones and especially before entering the control room. Hands must be washed with an anti-bacterial soap after gloves removed.
3. No surgical procedures are permitted in DISC. Contrast or anesthesia agent injection is allowed at DISC and is not considered a surgical procedure. Animals must be returned to their housing after the imaging, or humanely euthanized via an IACUC-approved method of euthanasia listed in the active protocol.

VI. Disinfection Procedures:

1. After imaging, and between animals from separate cages, all used equipment (MR coil, magnet bore) used in the study along with all working surfaces (tabletops) must be sprayed with appropriate disinfectant and wiped off with paper towel and or disposable sanitation wipes.
2. All animal waste must be collected and placed in the provided biohazards bags.
3. All disposable materials are to be placed in biohazard bags and disposed of in the appropriate disposal containers. All other washable materials (towels, sheets, etc.) are handled as universal precaution laundry.
4. In the case of euthanasia or sudden death of animal during the imaging: double bag the dead animal in a small red biohazard bag, bring it back to the animal facility, and dispose of it in the designated freezer. Use appropriate disinfectant for all equipment and working surfaces at MRI facility.

DISC Contact Information

[Http://www.depts.washington.edu/mrlab](http://www.depts.washington.edu/mrlab)

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https://depts.washington.edu/mrlab/3T_mod/week.php