

University of Minnesota

Center for Immunology, Dept. of _____

Record of Initial Training Year _____

Date _____

Name of Trainee _____ Trainee Signature _____

Lab Trainer name and job title _____

Lab-specific Trainer Signature _____

Before you start working at the bench there are things you need to do to satisfy safety and security regulations at the U of M. Please check off each step you complete it. (We need to keep a record on this on every person. So give this checklist to your lab manager when you're done. THIS FORM WILL SERVE AS THE IACUC REQUIRED STAFF TRAINING RECORD.)

____ 1. U Card access:

There are 4 steps for new acces: <http://hub.ahc.umn.edu/facilities/research-building-management-services/building-access>

____ 2. Annette Bethke and Malzona Anderson:

Introduce yourself to Annette Bethke and Malzona Anderson, executive secretaries for the Center for Immunology (Annette is at 2-142 WMBB, 6-2403 and Mal is at 2-140 WMBB, 5-0973).

____ 3. CFI Website: bookmark it: immunology.umn.edu, if you are a permanent member of the lab contact Deb Lins(benso010@umn.edu) to get your info on the site.

____ 4. IACUC and RAR training

1. Remind your PI or lab manager to add you to their animal protocol (they will need your X500 number and your employee/student ID number for this). This must be done first!! No training will be allowed until you are on a protocol.
2. Complete the on-line Animal Use tutorial about working with laboratory animals at [RAR Training](#). NOTE: a copy of the documentation that you took this training has to be kept in the lab as well, so please give a copy of your completion certificate to the lab manager.
3. Enroll at [Research Occupational Health Program \(ROHP\)](#). Once you register you will receive an email with further instructions. Follow the link provided in that e-mail. Make sure you have had a tetanus shot within the last 10 years, it's also a good idea to either have the clinic's name and phone numbers where shot was administered or a copy of your medical records for submission to ROHP.
4. Go to [Vet Services Training](#). Complete the appropriate forms and sign up for the appropriate training sessions you will need, see your lab manager for lab specific needs.
 - Initial [RAR Clearance & Facility Access](#) (for new staff).
 - Application for [U-Card Access to Additional RAR facilities](#) (for changes needed after initial clearance above) Do not fill this out unless you already have access
5. You'll need to set up an: **RAR Orientation, Facility Tour, Microisolator Techniques**: all training times are listed on a calendar at the bottom of the [RAR Services page](#), under the Required Training section or call 612-624-9100.
6. Ask for a list of approved procedures performed on mice in your lab from the lab manager so you know what other training is needed. Get hands-on training from other lab personnel or set up training with RAR personnel. When completed have the lab manager add your training info to RAR Training document.
7. If you will also be working with **BSL-2 agents**, you will need to be added to the appropriate IBC protocol. Go to the [IBC training site](#). You will need to launch the **Biological Safety in the Laboratory** training module and complete this training. If you will be working with recombinant or synthetic nucleic acid molecules you will also need to complete the training under **Implementation of NIH guidelines**.

_____ 5. Lab Safety: Go to [On-line Lab Safety Training](#) and complete the training for:

- [Introduction to Research Safety](#)
- [Chemical Safety](#)
- [Chemical Waste Management](#)

_____ 6. HIPPA: Take the appropriate online <http://www.privacysecurity.umn.edu/training/home.html>

_____ 7. Lab Specific Training (checklist starts on page 3, all items may not be covered):

This is done by the lab manager and will include a lab tour and an opportunity for you to ask some questions regarding the specific lab practices. Some questions you might have:

- What is the location and use of safety equipment (e.g. fire extinguishers, chemical hoods, personal protective devices, safety showers, eyewashes, first aid, circuit box if power must be cut, phone for calling 911)?
- Who is responsible for answering any safety-related questions I may have while working here?
- What is the fastest route out of this building in case of fire? What is an alternative route?
- What are the lab's specific procedures for discard of hazardous waste (chemical, radiation, and biological)?
- Do I have to take any additional training courses (e.g. radioisotope training, infectious materials handling, bloodborne pathogen training) before beginning work?
- Is there a list of equipment and materials with locations indicated for this lab? If not, who should I talk to when I am looking for something?
- What are the lab's procedures for use of common equipment and clean-up of shared space, equipment and materials?
- What and where are the water sources in this lab (i.e. distilled, deionized, ultrapure, tissue-culture grade)?
- Are there any other lab rules, policies, or procedures I should be aware of?

_____ 8. Further Training:

These items are for PERMANENT lab members only, rotation students will do this training at a later time once they have chosen their permanent lab.

- **Flow cytometry:** Get trained in on the FACscalibur and LSRII flow cytometers. Go the [Flow Core web site](#) for more information. There are 2 steps for signing up for training.
 1. Click on [new customer form link](#) to sign up
 2. [UFCCR training enrollment form](#) to select training dates/times.Paul Champoux runs the flow core here.
- **Xray Irradiator Training:** to get more info and to fill out training request form, [click here](#)
- **Radiation Safety:** some labs use radioactive materials, if yours does you will need the following training: [Radiation Safety Training](#)
- **WMBB Imaging facility:** To learn more information and receive training, talk to [Brian Fife](#) or [Jason Mitchell](#)
- **Controlled Substances:** This page offers a collection of important documents and links related to [controlled substances compliance](#).

Checklist of topics to be covered:

This is an outline and may not cover all needed topics, adjust accordingly for your lab.

Training fact sheets are available from the University Health & Safety (UHS) at 626-6002. They are also on the UHS web site: <https://www.uhs.umn.edu>

Chemical Safety (MERTKA, OSHA, Lab Safety Standard)

- ___ The physical and health hazards of chemicals in the laboratory
- ___ List of chemicals used in the lab (includes location, ddc codes and vendor information). Show where Chemicals are stored in the lab and in the flammable, acid and base cabinets under the fume hoods. Chemicals are stored by compatibility so after using a chemical please return it to its original location (this information is on the list of chemicals).
- ___ Permissible Exposure Limits
- ___ Signs and symptoms associated with exposures to chemicals in the lab
- ___ Methods and observations to detect presence or release of chemicals in the lab
- ___ Measures employees can take to protect themselves from exposure
- ___ Don't work with hazardous or volatile chemical materials when you are alone. Be sure someone is within earshot of any trouble.
- ___ Appropriate responses to emergency situations
 - ___ Spill responses (emergency numbers: 6-6002 during business hours, 911 at other times)
- ___ Contents, location, and availability of Lab Safety Plan
- ___ Contents, location, and availability of known reference materials (e.g. MSDSs, etc.)
- ___ General and laboratory-specific standard operating procedures
- ___ Department of Environmental Health and Safety as resource (6-6002; <http://www.dehs.umn.edu/index.htm>)
- ___ Location and use of the University of Minnesota Hazardous Chemical Waste Management Guidebook.
Chemical waste information can also be found on-line at http://www.dehs.umn.edu/hazwaste_chemwaste.htm.

Hazardous waste management (Minnesota Pollution Control Agency standard)

- ___ Definition of hazardous waste
- ___ Hazardous waste management procedures
 - ___ Use of U of M Hazardous Chemical Waste Management Guidebook
 - ___ Choosing hazardous waste containers and closures
 - ___ Storage and secondary containment of hazardous waste containers
 - ___ compatible and incompatible wastes: Storage of incompatible chemicals and wastes (separate by tray, cabinet, room, etc.). Liquid inorganic acids (DDC code 02LI, i.e. Hydrochloric Acid, Sulfuric Acid) and liquid organic acids (DDC code 02LO, i.e. Acetic Acid, Formic Acid, Glacial Acetic Acid) must be kept separate. These two types of acids can produce flames if mixed. All waste containers must have a yellow hazardous waste label on the container and all chemical components of the waste must be written out with not chemical symbols used. Please include percentage or amount of each component and include water if it is in the solution.
 - ___ liquid wastes
 - ___ volatile wastes

- ___ Labeling hazardous waste storage containers: It is important to write out the chemical names and not use chemical formulas. Having recipes for common reagents written on the bottle is also helpful (especially when it comes time to properly dispose of a solution).
- ___ Packing hazardous waste for pickup
- ___ Completion of waste packing forms and arranging for pickup of wastes
- ___ Container inspections
- ___ Sewering of waste (626-1604 for approval)
- ___ Evaporation of wastes - not allowable
- ___ No hazardous waste allowed in normal trash
- ___ Dealing with problem wastes (e.g. shock sensitive, water reactive)
- ___ Spill responses (emergency numbers: 6-6002 during business hours, 911 at other times)
- ___ Pollution prevention techniques
- ___ Self-auditing procedures
- ___ Laboratory-specific standard operating procedures for waste
- ___ Review the attached biological waste disposal table (<https://bohd.umn.edu/biosafety-occupational-health/biosafety>)
- ___ Chemical Waste Program (DEHS) as resource (6-1604; <https://dehs.umn.edu/environmental-health-safety-dehs/regulated-waste>)

Biological Safety and Hazards

- ___ Allergens, hazardous plant material, hazardous animals, opportunistic pathogens
- ___ If you work with infectious agents or with human blood, tissues, etc., you will need further training on these topics. Ask your lab supervisor or call the Department of Environmental Health and Safety (DEHS) at 626-5621. You may need to complete training covered under the Bloodborne Pathogen Standard (OSHA) and Infectious Waste Control (Minnesota Department of Health, MDH).
- ___ Physical hazards and working safely:
 - sharps and broken glass
 - electrical- Separate electricity and water (or use ground fault circuit interrupters)
 - fire- Work safely with fire or use an alternative.
 - heat and steam- Be careful around hot materials (autoclaves, hot water baths, ovens)
 - clean up slippery floor surfaces
 - chemical fumes
 - Do not try to lift more than you are comfortably able to lift
 - Use solid supports for reaching items above your head (never step on a chair with wheels)
- ___ Radiation hazards:
 - non-ionizing radiation hazards (e.g. ultraviolet light)
 - Ionizing radiation hazards: If you work with radioisotopes, you will need further training on this topic under the Radiation Protection Standard (Nuclear Regulatory Commission, NRC). Ask your lab supervisor or call Radiation Safety (a division of DEHS) at 626-6764.

___ How to prepare for and protect yourself in the lab: **Know the HAZARDS**

___ For chemicals: finding out about the hazards and how to work with them:

___ Know where to find Laboratory Safety Standard, Laboratory Safety Plan, MSDS, labels, reference books AND where each of these can be found in the College, department, and individual lab.

___ For equipment: read warning labels on equipment

___ measures to protect yourself in the lab:

do not block emergency equipment in your lab

reduce duration and frequency of exposure (including using smaller volumes)

use protective devices and know where they are located

use safety glasses/goggles/lab coats (PPE)

gloves (make sure to use proper type for work being done),

pipetting devices

fume hoods,

Some points to remember about fume hoods:

1. Use the fume hood for all toxic, volatile, and flammable chemicals.
2. The fume hood only works well if the sash is between you and what you are working on. Never use the sash above its sash lock. The override is only there so you can move large equipment into and out of the hood.
3. Even though the fume hoods are checked regularly by DEHS, a fan belt can break anytime. Therefore you should check that there is airflow into the hood before each use. One way to do this is to keep a strip of tissue taped to the bottom ledge of the hood. A working fume hood should keep that tissue fluttering upward.
4. Air currents disrupt the efficiency of the fume hood – so put hands in and wait before beginning work, remove hands slowly so you do not draw the toxic material out with you, don't have people walking behind you or opening/closing doors around you as you are using the hood.

**Check protective devices (quarterly fume hood inspection by DEHS, annual safety shower inspection by DEHS; weekly eyewash inspection by laboratory personnel; annual fire extinguisher inspection by DEHS)

___ Protective eyewear and liquid nitrogen gloves must be worn when removing samples from the liquid nitrogen tank or when tank is refilled with liquid nitrogen.

___ Follow standard operating procedures (general and specific SOP's and where to find them)

___ Plan lab carefully, work attentively

___ NO food, gum, drink, food containers or cosmetics should be stored, consumed or handled in labs

___ NO shorts or open toed shoes are allowed in labs

___ Review University of Minnesota Emergency Information and Phone Numbers and point out Protocol for Hazard Exposure/Injuries posted by the lab phone

___ Slow down, take care and be safe!

How to handle an accident

First evaluate severity of spill and personnel involved then get help (emergency numbers should be posted at the phone in the lab)

Be sure your lab has appropriate materials and protocols for cleaning up spills (see Prudent Practices in the Laboratory for help).

Basically, the response should be:

Small Chemical spill: If the spill is within your capabilities to clean up:

Alert all workers in the area

Confine the spill

Clean-up the spill

Dispose of the clean-up material appropriately (e.g. through HazWaste procedures)

Large chemical spill

evacuate (alert others, leave)

confine (close doors, isolate the area, keep people out)

report (6-6002; 911)

secure (post warning signs, post staff around area)

wait for DEHS/CWP to complete the clean-up

biological hazard spill

physical injury

radiation injury

When an accident occurs you must report an accident to your department and supervisor: incident forms are available in department offices; fill them out with your “supervisor” as soon as you can, turn them into department office

Getting medical care: Boynton Health Services, your health care provider, and workman’s compensation issues (see <https://policy.umn.edu/hr/workerscomp>)

Personal Safety

For more information: DEHS 626-2330; 626-6002 DEHS website: <http://www.dehs.umn.edu>

American Chemical Society website: <http://www.acs.org>

Emergency chemical spill response: 626-6002 during business hours; 911 at other times
(On cell phone: you can reach campus 911 with 612-623-0303)