

# **Overview of Safety Policy & Procedures for UTMB Investigators**

This booklet has been prepared by UTMB Environmental Health and Safety

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The purpose of this booklet is to acquaint new Principal Investigators to resources available in setting up research laboratories at UTMB in accordance with federal, state, and local regulations.

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## Statement of UTMB Safety Policy

The University of Texas Medical Branch (UTMB) is committed to maintaining a safe work environment for its employees, patients, visitors, and students. The Institutional Biological Safety Committee (IBC), the Radiation Safety Committee (RSC), the Chemical Safety Committee (CSC), and the General Safety Committee (GSC), determine safety policies to ensure that the campus remains a safe place to work. Additionally, these Committees ensure that UTMB and its Principal Investigators operate in compliance with all the federal, state, and local laws, as well as with professional guidelines.

Environmental Health and Safety (EHS) provides consulting and support services to help faculty and staff members meet the UTMB commitment to safety.

Detailed descriptions regarding handling and disposing of biological, chemical, radioactive materials, and other safety matters are available in the UTMB Safety Manual and UTMB Radiation Safety Manual. The manuals are maintained and updated by UTMB Environmental Health and Safety. They are also available electronically on the EHS website:

<http://utmb.edu/ehs>

# Use of Biological Agents

## Overview

Biological agents are those agents that present a risk or potential risk to the well-being of humans, animals or the environment. Virtually all biological materials are covered by the UTMB Biological Safety Policy. Under this policy, the use of biological agents (including human products, human tissues, commercial or harvested cell lines and any infectious agents) and recombinant DNA (rDNA) are strictly controlled.

The Principal Investigator (PI) is DIRECTLY responsible for all aspects of biological safety. This includes use of biological agents and rDNA in their laboratory as well as communicating to laboratory staff the scope of research being implemented.

## Things to know

Use of all oncogenic viruses, rDNA and most other biological agents require approval by the Institutional Biosafety Committee (IBC). The Principal Investigator is required to submit a **Notification Of Use (NOU) for Biological Agents, rDNA and Human Products** for IBC approval prior to any work being conducted.

The IBC meets once a month (first Friday) and all paperwork must be provided to EHS' Biological and Chemical Safety (B&C) Program **two** weeks prior to the meeting. Contact B&C Safety Program at (409) 772-1781 for the forms and committee meeting dates.

Safety Consultation Services and annual laboratory surveys are provided by the Biological and Chemical Safety Program. Their purpose is to help investigators meet their responsibilities for providing a safe work place, as well as to help monitor University facilities for compliance with various laws and regulations. The survey results are used when responding to granting agencies on an individual laboratory's safety performance.

Certification of Laminar Flow Biological Safety Cabinets is required (by CDC and NIH) annually or bi-annually and after they have been physically relocated. The B&C Safety Program coordinates the certification of the cabinets with the laboratory and the contracted certification service. One annual certification is free of charge to the user. All repairs, replacement of HEPA filters, and any recertifications are the responsibility of the user. B&C Safety Program will assist the user with selection and purchase specifications for laminar flow biological safety cabinets.

Steam sterilizers are maintained by Facilities Operations and Management (FOAM). Service may also be provided by an autoclave contractor. Sterilizer performance is monitored by EHS. Sterilizers duty cycles and performance must be documented by the laboratory.

Disposal of biologically contaminated material is covered under the Environmental Concerns section of this booklet.

**For Further Information**

Contact EHS Biological and Chemical Safety Program at (409) 772-1781, mail route 1111 for additional information concerning the possession, handling and storage of biological material.

## Requirements for Select Agents and Toxins

In October 1996, the Department of Health and Human Services (HHS), Centers for Disease Control and Prevention (CDC), and the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) released a federal regulation concerning the transfer of 'Select Agent'.

In order to comply, the Principal Investigator will:

- Complete a Notification Of Use for Biological Agents and rDNA and receive approval from the IBC and/or
- Complete a High Risk Chemical Safety Plan (HRCSP) (for Select Agent Toxins) and receive approval from the Chemical Safety Committee and,
- Complete a CDC Select Agent submission.

Specific steps for compliance at the research laboratory level include:

- Inspection by CDC/HHS or their designee for compliance with the regulations.
- Destruction or inactivation of all Select Agents in the laboratory.
- Meeting the requirements of the CDC/NIH publication Biosafety in Microbiological and Biomedical Laboratories (BMBL) for all laboratories handling biological agents and/or meeting the requirements of the NIH rDNA Guidelines.
- Compliance with requirements resulting from review and approval of the HRCSP and the NOU.
- Compliance with paperwork and notification requirements when ordering or transferring these agents.
- Maintaining strict security in select agent storage as well as maintaining a locked laboratory at all times and records of all visitors.

Environmental Health and Safety (EHS) will meet with select agent users to ensure all necessary requirements are met.

### List of Select Agent, regulated Toxins

#### **HHS Non-Overlap Select Agents and toxins (human pathogens only)**

Abrin  
Cercopithecine herpes virus 1 (Herpes B virus)  
*Coccidioides posadasii*  
Conotoxins  
Crimean-Congo Haemorrhagic fever virus  
Diacetoxyscirpenol  
Ebola virus  
Lassa fever virus

Marburg virus  
Monkeypox virus  
1918 pandemic influenza virus  
Ricin  
*Rickettsia prowazekii*  
*Rickettsia rickettsii*  
Saxitoxin  
Shiga-like ribosome inactivating proteins  
South American haemorrhagic fever viruses  
    Junin  
    Machupo  
    Sabia  
    Flexal  
    Guanarito  
Tetrodotoxin  
Tick-borne encephalitis (flavi) viruses  
    Central European tick-borne encephalitis  
    Far Eastern tick-borne encephalitis  
    Russian Spring Summer encephalitis  
    Kyasanur forest disease  
    Omsk hemorrhagic fever  
    Russian Spring and Summer encephalitis  
Variola major virus (Smallpox virus)  
Variola minor virus (Alastrim)  
*Yersinia pestis*

**Overlap Agents: HHS/High Consequence Livestock Pathogens (human and animal pathogens)**

*Bacillus anthracis*  
Botulinum neurotoxins  
Botulinum neurotoxin producing species of Clostridium  
*Brucella abortus*  
*Brucella melitensis*  
*Brucella suis*  
*Burkholderia mallei* (formerly *Pseudomonas mallei*)  
*Burkholderia pseudomallei* (formerly *Pseudomonas pseudomallei*)  
*Clostridium perfringens* epsilon toxin  
*Coccidioides immitis*  
*Coxiella burnetii*  
Eastern equine encephalitis virus  
*Francisella tularensis*  
Hendra virus  
Nipah Virus  
Rift Valley fever virus  
Shigatoxin  
Staphylococcal enterotoxins  
T-2 toxin  
Venezuelan equine encephalitis virus

**USDA High Consequence Livestock Pathogens**

African horse sickness virus  
African swine fever virus

Akabane virus  
Avian influenza virus (highly pathogenic)  
Blue tongue virus (Exotic)  
Bovine spongiform encephalopathy agent  
Camel pox virus  
Classical swine fever virus  
Cowdria ruminantium (Heartwater)  
Foot and mouth disease virus  
Goat pox virus  
Japanese encephalitis virus  
Lumpy skin disease virus  
Malignant catarrhal fever virus (Exotic)  
Menangle virus  
Mycoplasma capricolumi M.F38/M. mycoides mycoides  
Mycoplasma mycoides mycoides  
Newcastle disease virus (WND)  
Peste Des Petits Ruminants virus  
Rinderpest virus  
Sheep pox virus  
Swine vesicular disease virus  
Vesicular stomatitis virus (Exotic)

#### **Listed Plant Pathogens**

*Candidatus* Liberobacter africanus  
*Candidatus* Liberobacter asiaticus  
Peronosclerospora philippinensis  
Phakopsora pachyrhizi  
Plum Pox Potyvirus  
Ralstonia solanacearum race 3, biovar 2  
Schlerophthora rayssiae var zeae  
Synchytrium endobioticum  
Xanthomonas oryzae  
Xylella fastidiosa (citrus variegated chlorosis strain)

#### **Further information**

For more information contact EHS Biological and Chemical Safety Program at (409) 772-1781, mail route 1111.



# Use of Hazardous Chemicals

## Overview

The Principal Investigator is DIRECTLY responsible for all aspects of safety associated with the possession and use of all hazardous chemicals.

Hazardous chemical usage is overseen at UTMB by the Chemical Safety Committee. Under the authority of the Chemical Safety Policy, this Committee designates High Risk Chemicals (HRC), or those chemicals whose characteristics warrant greater than normal handling precautions. Because the list is subject to changes, reference should be made to the most current edition, available from EHS.

## High Risk Chemicals

High risk chemicals necessitate stringent controls for their use and require a written safety plan approved by the Chemical Safety Committee prior to obtaining, storing, or using. EHS will assist in the preparation of this written safety plan.

The creation of the HRC Safety Plan is not intended to trivialize the handling of all other chemicals. Guidelines for safe use of less acutely hazardous chemicals appear in the UTMB Safety Manual. It is expected and required by law that all lab personnel, including Principal Investigators, be knowledgeable regarding ALL chemicals used in the laboratory. Each lab must develop specific written procedures for their unique handling and storage of common chemicals as well as for those that are uniquely hazardous such as reactive, extremely toxic, or carcinogenic. EHS may make additional recommendations or requirements regarding these chemicals where concerns do not appear to be adequately addressed.

## **High Risk Chemicals**

Abrin	Microcystin
Aconitine (amorphous/crystalline)	Ricin
Aflatoxins	Sarin
Amanitin	Saxitoxin
Batrachotoxin	Shigatoxin
Bis (chloromethyl) ether, syn. Dichloromethyl ether	Soman
Botulinum toxin	Staphylococcal enterotoxins
Chloromethyl ether, methyl	Tabun
Clostridium perfringens epsilon toxin	Taipoxin
Conotoxins	Tetrachlorodibenzodioxin
Ciguatoxin	Tetanus toxin
Diacetoxyscirpenol	Tetrodotoxin
Diisopropyl fluorophosphate	Textilotoxin
Diphtheria toxin	T-2 Toxin
Maitotoxin	VX

## **Maintenance of Engineering Controls**

EHS, in conjunction with FOAM, assures the correct operation of the chemical fume hoods. Airflow for fume hoods and local exhaust systems on campus are certified by EHS at no charge.

If your chemical fume hood is not working correctly, you may request assistance from EHS Biological and Chemical Safety Program at (409) 772-1781 or you may call FOAM. Most repairs are considered building maintenance and are performed at no cost to the laboratory.

Chemical fume hood acquisition and installation must meet rigid engineering and architectural criteria. EHS will assist the PI in getting this information.

### **For Further Information**

Contact EHS Biological and Chemical Safety Program at (409) 772-1781, mail route 1111 for additional information concerning working with hazardous chemicals.

## **Use of the Environmental Containment Laboratory (ECL)**

The Environmental Containment Laboratory (ECL) is a core facility available for projects requiring a facility for Biosafety Level 3 agents, High Risk Chemicals and Toxins and special projects approved by the IBC, CSC, RSC and IACUC. Such projects must receive Chemical Safety Committee approval for use of the space following approval from any other applicable Committees.

## **Use of the Environmental Toxicology Laboratory (ETL)**

The Environmental Toxicology Laboratory (ETL) is a core facility designed for experimental research projects focusing on airborne exposures to toxic agents. The facilities allow for both *in vitro* and *in vivo* exposures. Application is made through the UTMB Chemical Safety Committee and laboratory management is provided by the Environmental Toxicology group within the Preventive Medicine and Community Health Department.

## **Notification of Use (NOU) & High Risk Chemical Safety Plan (HRCSP)**

The Principal Investigator is DIRECTLY responsible to assure that all proper documentation are filed and approved before commencing work.

EHS Biological and Chemical Safety Program will oversee submission and approval of the Notification of Use (NOU) and/or the High Risk Chemical Safety Plan (HRCSP).

**NOU for Human Products** will need to be submitted when human products such as blood, tissues, organs, and/or bones are being used as well as cell lines either primary or established. Established cell lines can be created at UTMB by the investigator or collaborator, acquired from another institute, or may be purchased from a vendor.

**NOU for Biological Agents and rDNA/rRNA** will need to be submitted when any BSL2 or above biological agent will be used or if any recombinant work that does not come under the NIH exemption is being used.

**HRCSP** will be submitted when a Highly Hazardous Chemical or a select agent toxin is being used. A chemical shall be considered for classification as a high risk chemical if at least one of the following criteria is met.

- The substance is acutely toxic (causing death or bodily harm) with an LD-50 of 100 mg/kg or mcg or less by any route of exposure.
- The substance is chronically toxic (includes tumor incidence, birth defects, or other serious health effects) at levels below:
  - a. 5.0 mg/kg per day oral exposure
  - b. 30 mg/kg per week dermal exposure
  - c. 5.0 mg/m<sup>3</sup> by inhalation exposure based on long term studies and chronic exposures.

### **For Further information**

Contact EHS Biological and Chemical Safety Program at (409) 772-1781, mail route 1111 to receive the appropriate forms.

# Use of Radionuclides

## **Overview**

A license to possess and use radioactive material (RAM) has been issued to UTMB by the Texas Department of State Health Services. Under the terms of this license, the Radiation Safety Committee (RSC) is delegated the responsibility for authorizing qualified individuals to use radioactive materials.

The Principal Investigator is DIRECTLY responsible for all aspects of radiation safety associated with his/her possession and use of radioactive materials.

## **Things to Know**

The use of radioactive materials at UTMB requires specific authorization from the UTMB-RSC. Because the application and authorization process can take several months; Principal Investigators who plan to use radioactive materials should apply to the RSC well in advance of the anticipated date of use.

Principal Investigators moving to UTMB from other institutions should contact the Radiation Safety Program prior to arriving at the UTMB campus for information and guidance. One of the RSC's requirements is that a letter of recommendation accompany an application and it may be easier to arrange for this before leaving one's present institution.

Radiation Safety staff members will assist researchers with the completion of this application.

Investigators bringing radioactive materials to the UTMB campus from their present institution must contact EHS (prior to the shipment of radioactive materials) and make arrangements to meet all legal requirements.

## **For Further Information**

Contact EHS Radiation Safety Program at (409) 772-2279 (mail route 1111) for additional information and assistance concerning radioactive materials usage.

# Use of Radiation Producing Machines and Lasers

## Overview

The Texas Department of State Health Services requires the registration of certain accelerator, X-ray, and laser radiation producing machines. Registration is accomplished through Environmental Health and Safety. The UTMB Radiation Safety Committee (RSC) is responsible for formulating policy governing the use of radiation producing machines.

The Principal Investigator is DIRECTLY responsible for all aspects of radiation safety associated with his/her possession and use of radiation producing machines.

## Things to know

Regulations require registration of radiation producing machines within 30 days of commencement of activities involving operation of the equipment. The possession and use of some machines requires specific authorization from the UTMB-RSC.

Investigators who intend to possess radiation producing machines, including lasers, may also be required to register and apply for a permit for their units.

## For Further Information

Contact EHS Radiation Safety Program at (409) 772-2279 (mail route 1111) for additional information and assistance concerning radiation producing machines and lasers.

# Shipment of Hazardous Materials Off Campus

## Overview

The transportation of hazardous materials is strictly regulated. Failure to adhere to applicable regulations can result in fines and/or punitive actions against the university, as well as the transporter. In addition to violating state and federal transportation laws, personal liabilities can be associated with failure to follow the appropriate shipping and handling requirements.

## Shipment within the USA

The U.S. Department of Transportation (U.S. DOT) regulations regarding the shipment of hazardous materials state that:

“no person may offer or accept a hazardous material for transportation in commerce unless...the hazardous material is properly classed, described, packaged, marked, labeled and in condition for shipping.” (49CFR-171.2)

Shipments of hazardous materials may require Department of Commerce permits for listed agents or for a deemed export.

## International Shipments

All international shipments must comply with the International Air Transport Association (IATA) Dangerous Goods shipping regulations and must be packaged by a trained and certified person.

All shipment of chemicals and/or biological material made outside the U.S.; as well as any select agent; BSL3 agent and radioactive material, regardless of destination, must be coordinated with EHS prior to shipping.

## Importation of Hazardous Material

Importation of biological, chemical and radioactive material may require Department of Commerce, USDA and/or CDC import permits.

## Things to know

In agreement with the Civil Aviation Security Field Office and the Federal Aviation Administration, UTMB has established a system to meet these requirements. No UTMB employee will be permitted to ship chemicals, biologicals or radioactive material without having completed the certified DOT/IATA training, and any such shipment must be reviewed by a representative of Environmental Health and Safety (EHS) prior to shipment.

Since it is not practical to provide DOT/IATA training to everyone at UTMB, and since the definition of hazardous material is very broad, all individuals who will be shipping chemicals,

biologicals or radioactive materials off campus must contact EHS for assistance in the packaging, documentation and labeling to meet the DOT and FAA regulations. EHS staff have successfully completed the certified DOT/IATA training course in order to carry out these responsibilities.

Please direct any shipping questions to EHS at (409) 772-1781, mail route 1111.



# Environmental Concerns

## Overview

All wastes generated at UTMB as a result of University activities (including, but not limited to, hazardous biological, chemical, and radioactive wastes) shall be managed in a manner that will maximize protection of human health and the environment. UTMB Policies and Procedures require that employees and tenants using university property or engaging in university activities comply with all applicable federal, state, and local environmental laws, regulations, and ordinances.

<http://www.utmb.edu/policy/ihop/search/08-0111.pdf>

## Things to know

Environmental Services (housekeeping staff) will pick up closed biohazard boxes that are ready for disposal. The laboratory is responsible for purchasing appropriate bags and sharps containers. Biohazard labeled, cardboard boxes are available on the building loading docks.

## **Biohazardous waste**

Biohazardous waste (also referred to as medical waste) as defined by the Texas Department of State Health Services includes microbiological, pathological, sharps, and animal waste (defined in the UTMB Safety Manual). Chemical and radioactive material are not to be placed in biohazardous waste containers.

Biohazardous/medical waste can be disposed of in one of several ways:

### Red bags:

Red bags identify biohazardous waste that needs to be treated prior to final disposal. Red bags are routed to the University's licensed biowaste disposal system that autoclaves and macerates the waste prior to final disposal as nonhazardous material. Red bags are placed in biohazard boxes prior to being transported to the processing center.

### Yellow bags:

Yellow bags identify biohazardous waste that is designated for incineration. Incineration is identified by specific regulations and must have prior approval. Yellow bags are placed inside biohazard boxes for transport and must be labeled with the word **INCINERATION** on the outside of the box prior to transport.

### Steam Sterilization:

Biohazardous waste to be steam sterilized in the laboratory must be placed in appropriate autoclave bags. **Autoclave bags must not be red.** Orange or clear autoclave bags are appropriate. Once sterilized the bag must state non-infectious or treated waste. Bags are placed into the regular trash for disposal.

### Chemical disinfection:

Chemical disinfection of liquid waste is accomplished by the addition of a chemical decontaminate, such as bleach, to the liquid in the proper proportions. Once disinfected, the liquid may be poured into the sanitary sewer system followed by a water rinse. Please note that the liquid must not be mixed with any other hazardous material that is not suitable for drain disposal.

### Sharps Containers:

Sharps are to be disposed into containers specifically designed for that purpose. Sharps containers can be placed inside a biohazard bag for disposal. Sharps containers are not to be placed in hallways for disposal.

## **Chemical waste**

Disposal of chemicals down the drain, in the trash, or by evaporation is prohibited by law. Chemical waste includes unused chemicals, material to be discarded from an experiment, and characteristic material (hazardous waste by definition). Chemical wastes are managed through Environmental Protection Management (EPM); a web based form is available for chemical and radioactive material pick-up request:

([www.utmb.edu/ehs/epm/epm.html](http://www.utmb.edu/ehs/epm/epm.html)).

Laboratories that generate hazardous chemical waste are called "satellite accumulation areas" (SAA) and have certain conditions for storing waste containers. Requirements include the following:

- Hazardous chemical waste must be stored only in designated SAA which must be in close proximity to waste generation locations. Hazardous waste generated in one lab cannot be stored in another lab or across a hallway.
- The waste container must always be closed except when it is necessary to add waste.
- All hazardous waste containers must be clearly labeled with the words "Hazardous Waste" and the complete chemical name. Chemical abbreviations and generalizations such as "halogenated solvents" are not acceptable.
- Use a container in good condition and compatible with the waste. Up to a total of 55 gallons of hazardous waste may be accumulated in SAA. No more than a total of one quart of acutely hazardous wastes (P listed chemicals) can be accumulated. ([www.utmb.edu/ehs/epm/epm.html](http://www.utmb.edu/ehs/epm/epm.html)).

## **Radioactive waste**

Radioactive waste disposal segregation procedures are outlined in the Radiation Safety Manual. Radioactive waste forms with authorized signatures are required for disposal. Scheduling for pick-up is available online ([www.utmb.edu/ehs/epm/epm.html](http://www.utmb.edu/ehs/epm/epm.html)).

Cardboard boxes are available for waste collection through EPM.

Used liquid scintillation cocktail (solvent based cocktail) is collected for disposal through EPM.

## **Source Reduction/Waste Minimization**

Source reduction strategies are carefully planned and should be included in the experiment plan. These strategies must meet the following goals:

- To minimize quantities of chemicals to be used
- To minimize disposal of hazardous materials, and
- To minimize risks.

Waste Minimization is a practice that reduces the volume or toxicity of waste requiring disposal. ChemSwap (<http://www.utmb.edu/ehs/EPM/Chemswap.htm>) is a chemical redistribution program designed for recycling unopened, in-date chemicals to UTMB laboratories free of charge.

UTMB is recognized as a “green” campus by the Texas Commission on Environmental Quality; for more information on University programs for recycling and energy conservation, please go to web page at: <http://www.utmb.edu/conservation/default.asp>.

**Disposal of waste by any other means than those stated above requires prior written approval by EHS.**

**For Further Information**

Contact EHS Environmental Protection Management at (409) 772-1781, mail route 1108 for additional information.

## Training

The Principal Investigator is responsible for assuring proper training of all his/her staff. Proper documentation of all laboratory staff training must be maintained. Training requirements are specific to the work being conducted in the laboratory. EHS will provide training as needed.

### **Training required by all staff**

- Laboratory Safety Orientation (LSO)
- Hazard Communication Act Training (HCA)

### **Specific training based on work being performed**

- Bloodborne Pathogen Training
- Laboratory Biosafety training according to research requirements
  - BSL2
  - BSL3
  - BSL4
  - Animal handling
- Radiation Safety Training
  - Basic Radiation Safety in the Laboratory (BRSL)
  - Radiation Protection In Research (RPIR)
  - Annual Radiation Safety Refresher
- Laser Safety Training
  - Laser Safety for Research
  - Laser Safety for Medical Use
- Dangerous Good Shipping Certification

Training on specific topics can be arranged by request.

### **For Further Information**

Contact EHS Biological and Chemical Safety Program at (409) 772-1781, mail route 1111 for additional information concerning training.

# Fire Safety

## Overview

The Principal Investigator (PI) is responsible for ensuring that flammable liquids, solvents, and reactive chemicals used are stored safely. All flammable liquids must be stored in approved flammable liquid storage cabinets and approved safety cans. Quantities, container sizes, storage, and daily use amounts (laboratory work bench quantities) will be in accordance with the National Fire Protection Association (NFPA) guidelines.

As a rule, UTMB employees are encouraged to implement the RACE acronym in the case of a fire. RACE is defined as the following:

**R**escue all individuals from the affected area

**A**larm, turn in the alarm, activate the alarm pull station, dial 21211 and give the following information:

Name and Title

Telephone Extension

Location

Extent of Fire

**C**onfine the smoke and fire from all other areas by closing all doors

**E**xtinguish get an extinguisher to put out the fire. If you can't handle the situation.

**E**vacuate the area.

### **Fire Extinguishers**

Portable fire extinguishers are located throughout all UTMB facilities according to the type of fire they can extinguish. These devices are to be used to extinguish small or beginning fires. All new employees are provided with this information during new employee orientation. Any employee wishing to operate an extinguisher should contact EHS/Occupational Safety & Fire Prevention (OS&FP) at Ext. 24190.

### **Fire Drills**

Fire drills are conducted in all UTMB buildings by EHS/OS&FP on a routine basis. If your laboratory hasn't participated in a complete evacuation drill in the past year, contact OS&FP at Ext. 24190 to schedule a drill in your area.

### **Site-Specific Fire Plan**

Each laboratory should develop a site-specific contingency plan in the event of a fire. The completed plan should be placed in an area where it is easily accessible by all laboratory personnel.

EHS will assist in evaluating and developing fire protection methods for:

- New laboratories
- Evacuation plans
- Laboratory renovations
- Fire safety equipment
- Site specific training
- Chemical storage
- Training information
- Fire drill information

### **Emergency Procedure Information**

The PI is also responsible for ensuring that fire safety equipment is maintained in its designated location.

- A copy of the UTMB Emergency Preparedness Plan is to be maintained in each laboratory.
- A departmental emergency response plan should be developed for each department.
- An evacuation plan should be developed for all personnel in each area.
- UTMB Emergency Telephone Numbers are in the front of the UTMB telephone directory.

### **Further information**

Assistance in the use of fire/life safety equipment can be obtained from EHS Occupational Safety and Fire Prevention Program at (409) 772- 4190, mail route 1108 .



# Electrical Safety

## Overview

UTMB is committed to the safety of its employees and visitors from hazards such as electrical shock. The Principal Investigator is DIRECTLY responsible to ensure that all personnel is made aware that the use of electricity in their assigned job introduces potential hazards of burn, shock, explosion, damage to equipment, fire, and power failure with the possibility of injury, disability or death.

The policy on Electrical Safety at UTMB conforms to the standards and guidelines of the following national and state agencies:

- National Fire Protection Association (NFPA)
- Underwriters Laboratories (UL)
- Joint Commission on Accreditation of Hospitals (JCAHO)
- Texas Department of State Health Services (TDSHS)
- Association for the Advancement of Medical Instrumentation (AAMI)

## Altering Building Wiring and Utilities

Any modifications to existing electrical service in a laboratory or building must be completed or approved by Facilities Operation and Management (FOAM) personnel or a FOAM approved contractor. All modifications must meet both safety standards and FOAM design requirements.

Any unapproved laboratory facilities modifications discovered during laboratory surveys or other activities are reviewed by EHS and FOAM staff to determine whether they meet design specifications.

## Preventive Measures

Know the location of all power plugs and off switches on equipment in your area. Free electrical testing service is provided by Research Technology Support (RTS) at ext. 29347. RTS can provide:

- oversight for the day to day electrical safety testing program
- consultation services as required
- oversight for the establishment of preventative maintenance and electrical safety testing protocols
- Testing and calibration procedures.

**Further information**

Assistance in the use of fire/life safety equipment can be obtained from EHS Occupational Safety and Fire Prevention Program at (409) 772- 4190, mail route 1108 .

## **Salvage, Relocation, Repair and Disposal of Laboratory Equipment**

Prior to salvage, relocation, repair or disposal of laboratory equipment, the Principal Investigator must take appropriate steps to ensure that the laboratory equipment is free of hazardous contaminants.

All UTMB laboratories will be responsible for the decontamination of laboratory equipment prior to salvage, relocation and/or inventory. Materials Management and FOAM will not salvage, dispose or relocate laboratory equipment without the appropriate documentation.

All equipment which has contained hazardous biological, chemical and/or radioactive materials, including chemical fume hoods and biological safety cabinets, must be appropriately decontaminated/disinfected by the user. If further assistance is needed to determine appropriate decontamination methods and obtaining the **Laboratory Equipment Decontamination Form** contact EHS Biological and Chemical Safety Program at (409) 772-1781.

### **Defective Equipment**

Never ignore a “tingling” sensation caused by a piece of equipment. This indicates that the equipment is defective. Turn it off, unplug it, tag it “Remove From Service” and report it to the appropriate department for repairs:

- Research Technology Support (RTS)
- Facilities Operations and Management (for building equipment and power) - ext 21586

Any device or instrument under a private maintenance contract (i.e. copy machines) should be reported directly to the company that services the contract. Biological Safety Cabinets and Chemical Fume Hood problems must be reported to EHS Biological and Chemical Safety Program (409) 772– 1781.

### **For additional information**

Contact RTS on the UTMB web site or call ext 23750, mail route 1117.

## Laboratory Closure and/or Relocation Policy

UTMB laboratory personnel shall support responsible methods for laboratory closure and/or relocation ensuring a safe transition for all UTMB departments involved. Principal Investigators/faculty members are responsible for ultimate disposal or movement of equipment and hazardous biological, chemical and radioactive materials in their area. Faculty members leaving UTMB must abide by the procedures for closure and/or relocation of laboratory equipment and hazardous materials.

EHS **must be contacted** at (409) 772-1781 at least 3 weeks prior to the relocation or move date. Assistance will be provided for decontamination of all laboratory equipment, and laboratory clean up. Assistance will also be provided in setting up the laboratory in the new location.

## **Emergency Weather Plans**

UTMB is at risk for severe weather conditions mainly during hurricane season from June 1 to November 30.

In preparation for this, UTMB has developed an overall Emergency Weather Plan. Each Department has created a Department specific plan; it is the Principal Investigators responsibility to ensure that his/her lab has a plan in place as well. A copy of the Emergency Weather Information Form with the name and contact information for each emergency contact personnel must be sent to EHS, mail route 1111, and posted on the laboratory door, by May 15 of each year.

Before the beginning of the season, meetings are organized by the Office of the Dean of Medicine to help faculty and staff prepare for such an event. Departments and laboratories may contact EHS at (409) 772-1781 for focused training.

The Principal Investigators are responsible for ensuring that in the case of an emergency evacuation of the campus due to severe weather, their laboratories and all hazards inside are well secured.