

Appendix F: Laboratory Specific Exposure Control Plan

Protocol title: _____

Investigator: _____

Review work assignments to determine employee potential for exposure to laboratory-acquired infections.

Principal investigators and laboratory supervisors need to perform an exposure determination concerning which employees may incur occupational exposure to blood or other potentially infectious materials (OPIM), biohazardous materials or lab-acquired infections. The exposure determination is made without regard to the use of personal protective equipment (i.e. employees are considered to be exposed even if they wear personal protective equipment). This exposure determination lists all job classifications in the laboratory and which employees may be expected to incur such occupational exposure, regardless of frequency. At this Laboratory the following job classifications are:

Identification and Responsibilities of employees covered by the Exposure Control Plan

Not all employees in the laboratory are expected to be exposed to blood or OPIM, biohazardous materials or lab-acquired infections. However, tasks or procedures that would cause these employees to have occupational exposure are also required to be listed in order to clearly understand which employees in these categories are considered to have potential occupational exposure. At this Laboratory the job classifications and associated tasks for these types of employee categories are as follows:

Employees have the most important role in the compliance program. The ultimate execution of the Plan rests in their hands. The employee is responsible for the following activities.

- Know what tasks performed have occupational exposure
- Attend blood borne pathogen training sessions
- Plan and conduct all operations in accordance with work practice controls
- Develop and practice good personal hygiene habits

Universal precautions and specific measures on how to minimize the risk of exposure

Universal precautions need to be observed at this laboratory in order to prevent contact with blood or other potentially infectious materials. All Blood, OPIM, zoonotic diseases, biohazardous material, infectious agents, toxins or wild/unknown sources that may be transmitted to humans need to always be considered infectious regardless of the perceived status of the source.

Engineering Controls - biosafety cabinet, centrifuge safety cups, sharps containers, etc.

Engineering controls along with work practice controls are utilized to eliminate or minimize exposure to employees at this laboratory. Personal protective equipment needs to be used where occupational exposure remains after institution of engineering and work practice controls. At this facility the following engineering controls will be utilized: (list controls, such as biosafety cabinet, centrifuge safety cups, sharps container, etc.)

Examples:

1. Handwashing facilities or antiseptic hand cleansers, towel or antiseptic towelettes, or are readily accessible to all employees who have the potential for exposure.
2. Contaminated sharps, specimen and secondary containers should have the following characteristics:
 - puncture-resistant
 - Color-coded or labeled with a biohazard warning label
 - Leak-proof on the sides and bottom

- Closable

The above controls should be reviewed annually and maintained on a regular schedule. The schedule for reviewing the effectiveness of the controls is as follows: list schedule such as daily, once/week, etc. Also list the person who has the responsibility to review the effectiveness of the individual controls, such as the supervisor for each Laboratory, etc.

Hand washing facilities are available to the employees who incur exposure to blood or other potentially infectious materials. Hand washing sinks are required in the laboratory so they will be readily accessible after incurring exposure. At this facility hand washing facilities are located: (list locations, such as room number and area in the laboratory).

If hand washing facilities are not feasible, an alternative is to use antiseptic cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. If these alternatives are used hands are to then be washed with soap and running water as soon as feasibly possible. Principal investigators or supervisors who have this type of alternative because of the lack of accessible hand washing facilities should list the location, tasks, and responsibilities to ensure maintenance and accessibility of these alternatives.

After removal of personal protective gloves, employees must wash hands and any other potentially contaminated skin area IMMEDIATELY or AS SOON AS FEASIBLY possible with soap and water.

If employees incur exposure to their skin or mucous membranes then those areas shall be washed or flushed with water as appropriate as soon as feasibly possible following contact.

Work practices - hand washing, personal hygiene, labeling, sharps handling, etc.

Contaminated needles and other contaminated sharps should never be bent, recapped, removed, sheared, or purposely broken. The exception to this is the procedure would require contaminated needles be recapped or removed and no alternative is feasible. If such action is required then recapping or removal of the needle must be done by the use of a mechanical device or a one-handed technique. This laboratory recapping or removal is only permitted for the following procedures:

(List the procedures and also list the mechanical device to be used or alternately if a one-handed technique will be used).

In work areas where there is a reasonable likelihood of exposure to blood or other potentially infectious materials, employees are not to eat, drink, apply cosmetics or lip balm, smoke, or handle contact lenses. Food and beverages are not to be kept in refrigerators, freezers, shelves, cabinets, or on counter tops or bench tops where blood or other potentially infectious materials are present.

Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

All procedures need to be conducted in a manner which will minimize splashing, spraying, splattering, and generation of droplets of blood or OPIM. Methods which will be employed at this laboratory to accomplish this goal are: list methods, such as centrifuge cups, biosafety cabinets etc.

Personal Protective Equipment (PPE) Check all that apply.

Gloves Lab coat Safety glasses HEPA respirator mask

Housekeeping - cleaning, decontamination and waste handling.

Contaminated sharps are to be placed immediately, or as soon as possible, after use into an appropriate sharps container. At this facility sharps containers are puncture resistant, labeled with a biohazard label, and leak proof. (Employers should list where sharps containers are located as well as who has responsibility for removing sharps from containers and how often the containers will be checked to remove the sharps).

Laboratory Specific Emergency Plan to follow if there is an exposure or release

Laboratory Specific Emergency Plan

1. Primary Laboratory Emergency Contacts (Refer to your Emergency Notification Signage)
Note: Also include other helpful contact here (e.g. Campus Facilities, EHS, MU Police, etc.)
2. General Laboratory Response Procedures for Anticipated Biohazard Emergencies (Fire, Chemical or Biological Releases, Medical Emergency, Radiation Emergency, Tornado, Mechanical Equipment or Physical Facility Emergency, Flooding, Oral or Written Threat, etc.)
3. Emergency Evacuation Procedures (Escape Routes w/ Diagram, Critical Laboratory Operation Shutdown, Headcount and Assembly Point Coordination, Laboratory Personnel Responsibilities and Duties, etc.)
4. Description of Emergency Alarm Systems (Refer to your Building Specific Emergency Action Plan)
5. Detailed Laboratory Precautionary Procedures (List of Major Potential Laboratory Biohazards and Procedures to Reduce Biohazard Risk)
6. Additional Biohazard Emergency Information (Other Notifications, News and Media Relations, Post Emergency Meeting, Incident Report System, Frequency of Plan Updates, etc.)

Hepatitis B vaccine

All employees who have been identified as having exposure to blood or other potentially infectious materials will be offered the Hepatitis B vaccine, at no cost to the employee. The vaccine will be offered within 10 working days of their initial assignment to work involving the potential for occupational exposure to blood or other potentially infectious materials unless the employee has previously had the vaccine wishes to submit to antibody testing which shows the employee to have sufficient immunity. Employees who decline the Hepatitis B vaccine will sign a waiver which uses the wording in Appendix A of the OSHA standard. Employees who initially decline the vaccine but who later wish to have it may then have the vaccine provided at no cost. (Principal Investigators and Laboratory Supervisors should list here who has responsibility for assuring that the vaccine is offered, the waivers are signed, etc. Also, the Principal Investigator should list who will administer the vaccine). _____.

Exposure Incident Reporting and Recordkeeping

When the employee incurs an exposure incident, it should be reported to (list who has responsibility to maintain records of exposure incidents): _____.

All employees who incur an exposure incident will be offered post-exposure evaluation and follow-up in accordance with the OSHA standard. This follow-up will include the following:

- Documentation of the route of exposure and the circumstances related to the incident.
- If possible, the identification of the source individual and if possible, the status of the source individual will be tested for infection (after consent is obtained) such as HIV/HBV infectivity.
- Results of testing of the source individual will be made available to the exposed employee, with the exposed employee informed about the applicable laws and regulations concerning disclosure of the identity and infectivity of the source individual.
- The employee will be offered the option of having their blood collected for testing of the employee serological status (such as HIV/HBV). The blood sample will be preserved for up to 90 days to allow the employee to decide if the blood should be tested for serological status (such as HIV/HBV). However, if the employee decides prior to that time that testing will or will not be conducted then the appropriate action can be taken and the blood sample discarded. The employee will be offered post exposure prophylaxis in accordance with the current recommendations of the U.S. Public Health Service. These recommendations are currently as follows: (These recommendations may be listed as an appendix to the plan) _____.

- The employee will be given appropriate counseling concerning precautions to take during the period after the exposure incident. The employee will also be given information on what potential illnesses to be alert for and to report any related experiences to appropriate personnel.
- The following person(s) has been designated responsible to assure that the policy outlined here is effectively carried out as well as to maintain records related to this policy: _____.

INTERACTION WITH HEALTH CARE PROFESSIONALS

A written opinion shall be obtained from the health care professional who evaluates employees of this facility. Written opinions will be obtained in the following instances:

- When the employee is sent to obtain the Hepatitis B vaccine.
- Whenever the employee is sent to a health care professional following an exposure incident.

Health care professionals shall be instructed to limit their opinions to:

- Whether the Hepatitis B vaccine is indicated and if the employee has received the vaccine, or for evaluation following an incident.
- That the employee has been informed of the results of the evaluation.
- That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials. (Note that the written opinion to the employer is not to reference any personal medical information).

Training - Initial and Annual Biohazardous Materials Training

MU requires anyone working with biohazardous materials to have appropriate training. New employees are required to take an introductory course. A separate introductory training course is available for Ancillary Workers. Once initial training is received, a refresher is required every three years. Blood Borne Pathogens training - Universal Precautions needs to be taken initially with an annual refresher.

- Introduction to Biosafety - Basic Microbiological Safety Practices, Techniques and Material Acquisition
- Biosafety Refresher (every 3 years)
- Biohazardous Materials Handling and Safety for Ancillary Workers
- Biohazardous Materials Ancillary Refresher (every 3 years)
- Initial Blood Borne Pathogen Training - Universal Precautions
- Annual Blood Borne Pathogen Training - Universal Precautions Annual Refresher
- Autoclave Safety Training
- Biosafety Cabinet Training

The Principal investigator is responsible for providing the type of training needed for every individual based on their contact and the project. While no overall educational or training level can be specified for all persons who are, or will become, engaged in biohazardous activities, all should at least meet minimum requirements for the area or activity involved. Whenever gaps in educational background are noted, or whenever remedial or update training is needed, it is to be provided. Educational evaluations and additional education or training requirements are to be imposed on the basis of each individual and project.

All persons working with or around biohazardous material(s) must:

- Be instructed in the laboratory specific exposure control plan; entry control procedures; the meanings of the various signs, signals, or other controls used; applicable emergency procedures applying to their work activities and area, recognition and prevention of dangerous situations and/or exposures, and the symptoms (acute and chronic) of possible exposures.
- Receive documented training in basic biosafety controls; applicable directives (including use of this handbook); and specific methods and requirements of their work and work area.

Training classes offered by EHS can assist the PI with hazardous materials, radioactive materials and biological hazard safety. For other training courses offered by EHS call 882-7018.

Record Keeping

All biosafety records including Blood Borne Pathogen Standard requirements by the Occupational Safety and Health Administration (OSHA) will be maintained by: (Registered User # _____).

DATES

All provisions required by the Laboratory Specific Exposure Control Plan will be implemented by the Registered User by: (Insert Date _____).

All employees will receive biological hazard safety training (other than EHS training) from the Principal Investigator, Supervisor or Registered User. The trainer(s) who are responsible for conducting the training are: _____.

The outline for the training material (other than EHS training) is located (list where the training materials are located).
_____.

Reference: U.S. Occupational Safety and Health Administration (OSHA) Blood-borne Pathogens Standard (29 CFR 1910.1030). http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051