UNIVERSITY OF MINNESOTA

Exposure Control Plan for Bloodborne Pathogens

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I. PURPOSE AND SCOPE

The *Occupational Safety and Health Administration* (OSHA) is responsible for the oversight and regulation of working conditions where employees may be exposed to bloodborne pathogens. OSHA ensures safe and healthful working conditions by promoting safe work practices to minimize the incidence of disease due to bloodborne pathogens. OSHA enacted the *OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030* (and 2001 revision to comply with the *H.R.5178 - Needlestick Safety and Prevention Act*), to reduce/eliminate occupational exposure to hepatitis B virus, hepatitis C virus, human immunodeficiency virus (HIV), and other bloodborne pathogens that employees may encounter at work.

This University of Minnesota's *Exposure Control Plan for Bloodborne Pathogens* covers all employees who have, or may have, occupational exposure to human blood and/or Other Potentially Infectious Materials (OPIM) as defined by the *Bloodborne Pathogens Standard*.

This University of Minnesota's *Exposure Control Plan for Bloodborne Pathogens* is based on the following principles:

- The risk of exposure to bloodborne pathogens present in human blood or OPIM should never be underestimated.
- It is prudent to minimize exposure to all bloodborne pathogens present in human blood or OPIM.
- To promote safe working conditions where human blood, bloodborne pathogens or OPIM. may be present, engineering controls and safe work practices must be instituted.

II. OBJECTIVES

The objectives of this plan are to:

A. Provide training information and guidance to prevent or minimize occupational exposure to bloodborne pathogens.

B. Ensure compliance with the *OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030* where applicable.

III. OVERSIGHT

Information in this plan follows regulations and guidelines as outlined by:

A. Occupational Safety and Health Administration (OSHA) *OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030*

B. Occupational Safety and Health Administration (OSHA) *Bloodborne Pathogens Standard* 29 CFR 1910.1030 regarding the *H.R.5178 - Needlestick Safety and Prevention Act*.

IV. DEFINITIONS

As defined in the *OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030*

A. **Bloodborne Pathogens** mean pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).

B. **Blood** means human blood, human blood components, and products made from human blood.

C. **Occupational Exposure** means reasonably anticipated skin, eye, mucous membrane or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

D. **Other Potentially Infectious Materials (OPIM) means:**

1. The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, body fluids that are visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids. *Note: Bodily fluids that visibly do not contain blood, including vomit, urine and feces do not fall under the definition of OPIM but must still be handled with standard precautions at the University of Minnesota*
2. Any unfixed tissue or organ (other than intact skin) from a human (living or dead).
3. HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing

culture medium or other solutions; blood, organs, or other tissues from experimental animals infected with HIV or HBV.

E. **Parenteral** means piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

F. **Regulated Waste** means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

V. ROLES AND RESPONSIBILITIES

The following roles and responsibilities for implementation of this *Exposure Control Plan for Bloodborne Pathogens* will be updated as needed to reflect any change(s) in the assignment of these responsibilities.

A. **Deans, Directors, and Department Heads**

1. Have overall responsibility for their entire organization regarding implementation of and compliance with this *Exposure Control Plan for Bloodborne Pathogens.*
2. Work with principal investigators, supervisors, and staff to develop and administer any additional policies and procedures needed to support the implementation of this plan.
3. Revise and update procedures for all areas of responsibility at least annually.
4. Identify job classifications in which employees have a potential for occupational exposure to human blood, bloodborne pathogens and OPIM.
5. Identify the tasks and procedures in which potential occupational exposure may occur.
6. Ensure that a program is in place to:

a. Provide annual training on bloodborne pathogens and OPIM.
b. Maintain training records.
c. Report sharps injuries.
d. Offer hepatitis B vaccination/declination forms.
e. Ensure that covered employees comply with requirements outlined in this plan for training, safe practices, injury reporting, and follow-up.

B. **Principal Investigators**

1. Ensure compliance with this *Exposure Control Plan for Bloodborne pathogens* within their research area.
2. Ensure compliance with Institutional Biosafety Committee's training requirements (see section F) when applicable.
3. Identify personnel with a potential for occupational exposure to human blood, human cells or human cell lines, bloodborne pathogens and OPIM.
4. Work with lab supervisor(s) and employees to develop and administer any additional policies and procedures needed to support the effective implementation of this plan.
5. Develop, and at least annually review and/or revise and update standard operating procedures (SOPs) for all areas of responsibility. Work with lab supervisor(s) and employees to develop standard operating procedures that reflect:

    a. Appropriate biosafety level practices outlined in CDC-NIH's *Biosafety in Microbiological and Biomedical Laboratories 6th Ed*.
    b. The biosafety level approved by the Institutional Biosafety Committee (IBC) where applicable.

C. **Work Unit Supervisors** (in lab/research settings, this would be the Principal Investigator if there is no other lab supervisor)

1. Ensure compliance with this *Exposure Control Plan for Bloodborne Pathogens* in their work areas by working directly with the employees to promote and ensure that proper exposure control procedures are followed.
2. Inform all employees of potential hazards in the workplace.

3. Investigate and report exposure incidents by filling out an electronic First Report of Injury (eFROI) and take the necessary action to prevent similar incidents from occurring.
4. Provide **Job-Specific Training** at time of initial work assignment and at least annually thereafter. Training content shall comply with the *OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030* (g) (2) (vii) and any other OSHA regulations applicable to the employee's duties.
5. Regularly review the availability of products engineered to reduce sharps exposure in order to determine if there is an acceptable replacement for lab procedures.
6. Keep employees' **Job-Specific Training** records for a minimum of 5 years.

D. **Employees**

1. Responsible for day-to-day compliance with this *Exposure Control Plan for Bloodborne Pathogens* as part of their work procedures.
2. All workers having exposure or potential exposure to human blood, human cells or human cell lines, bloodborne pathogens and/or OPIM are required to:
    a. Understand potential exposure from work tasks and route of exposure.
    b. Conduct all tasks in accordance with established rules and SOPs.
    c. Successfully complete all required initial and annual bloodborne pathogen training through:
        - Completion of the online Bloodborne Pathogens Annual OSHA Requirement (UHS 110) module and in-person **Job-Specific Training** with a PI or Work Unit Supervisor

        OR.

        - In person Bloodborne Pathogens presentation provided by a qualified BBP trainer with in-person **Job- Specific Training** incorporated.

    d. Practice good personal hygiene habits.

E. **Health, Safety, and Risk Management (HSRM)**

1. Update this *Exposure Control Plan for Bloodborne Pathogens* at least annually.

2. Conduct periodic inspections of all work areas where the program applies including Biosafety Level 1, 2 and 3 (BSL1-3) research labs to ensure that engineering controls are in place, safety procedures are being followed and required training has been completed.
3. Develop suitable education/training programs and materials.
4. Provide web-based or in-person training (see Section XIII).
5. Maintain web-based biosafety content and a list of biosafety references.
6. Maintain a sharps log.
7. Conduct annual reviews of the program in compliance with Section XIV.
8. Conduct incident investigations and recommend corrective actions to be taken to prevent similar incidents from occurring when merited.

F. **Institutional Biosafety Committee (IBC)**

1. Reviews research and teaching protocols when direct handling or manipulation of bloodborne pathogens such as hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV) etc., is anticipated. IBC oversight and review includes: ÷
    a. Appropriate biosafety level
    b. Exposure control methods
    c. Decontamination methods, w~~W~~aste disposal and spill clean-up methods
    d. Completion of IBC required training for the work being done. Although not required by OSHA, the IBC requires personnel on IBC applications to complete Bloodborne Pathogens training every year if they are working with zoonotic infectious agents or blood/fluids/cells (of non-human primate origin)

Note: In addition to bloodborne pathogens, the IBC reviews research or teaching activities involving recombinant or synthetic nucleic acid molecules, potentially hazardous infectious agents, and potentially hazardous biologically-derived toxins.

VI. ACCESSIBILITY

A copy of this *Exposure Control Plan for Bloodborne Pathogens* is accessible to all employees on the Biosafety and Occupational Health website.

Employees, their health care providers, and other concerned parties may also access the *OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030*.

VII. EXPOSURE DETERMINATION

Directors, department heads, work unit supervisors and principal investigators identify those employees and job classifications that have occupational exposure to bloodborne pathogens, human blood, human cells or human cell lines, and OPIM. For each new work assignment, the principal investigator or work unit supervisor will make an individual employee exposure determination. Exposure determination must be made without regard to the use of personal protective clothing and equipment.

When conducting an employee exposure determination, it is important that a distinction is made between job classifications in which all employees have the potential for occupational exposures given their job duties or job classifications in which only some employees may have potential for occupational exposures depending on the tasks they perform. For classifications where only some of the employees have potential for occupational exposures, the tasks that put them at risk of occupational exposures must be identified. Please see Appendix A on page 25 for examples of these job classifications and tasks.

VIII. METHODS OF COMPLIANCE

The following five methods of compliance will be implemented:

A. **Universal Precautions**

1. Universal Precautions is an approach to infection control in which all human blood and OPIM are treated as if they are known to be infectious.

2. Principal investigators and supervisors are responsible for overseeing that Universal Precautions are appropriately implemented and carried out by employees in their work area.

B. **Engineering Controls and Other Safety Equipment**

1. **Engineering Controls** means controls (e.g., sharps disposal containers, self- sheathing needles, safer medical devices such as sharps with engineered injury protections, and needleless systems) that isolate or remove the bloodborne pathogens, human blood, human cells/cell lines, and OPIM from the workplace. Engineering Controls:
    a. Shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.
    b. Are used whenever possible to eliminate or minimize employee exposure to human blood, human cells or cell lines, bloodborne pathogens and OPIM.
    c. Are reviewed annually for the availability of safer medical devices; the review is documented, and input is provided by non-administrative staff.
2. Containers for contaminated sharps have the following characteristics:
    a. Puncture-resistant
    b. Color-coded or labeled with a biohazard warning label
    c. Leak-proof on the sides and bottom
    d. Closable
3. Hand washing sink and eyewash facilities are readily accessible.
4. The following additional containment equipment is used as needed for specific procedures:
    a. Biological safety cabinets
    b. Centrifuge secondary containment such as safety buckets, sealed rotors with O-ring, etc.
    c. Other ventilated enclosures, as needed

C. **Work Practice Controls**

It is the responsibility of work unit supervisors, in conjunction with directors, department heads, and principal investigators, to oversee the implementation of work practice controls.

1. Hygiene procedures include:
    a. Wash hands immediately, or as soon as feasible, after removal of gloves or other personal protective equipment.

b. Wash hands, and any other skin, with soap and water immediately, or as soon as feasible, following contact with blood, human cells or cell lines, bloodborne pathogens or OPIM.

c. When it is not feasible to provide a sink, such as for fieldwork, antiseptic hand cleansers may be used, but hands shall be washed with soap and running water as soon as feasible.

2. Sharps procedures:

a. Contaminated needles and other contaminated sharps are not bent, recapped, or removed unless it can be demonstrated that there is no feasible alternative. Necessary recapping is done through mechanical means or with a one-handed technique as discussed on the Sharps Fact Sheet.

b. During use, sharps containers must be easily accessible and kept upright.

c. Contaminated sharps are placed in appropriate sharps containers immediately, or as soon as possible after use.

d. Sharps containers must be replaced when ¾ full and closed prior to removal.

e. A sharps injury log must be maintained. The log must protect the confidentiality of the injured employee and include:

- The type and brand of device involved in the incident.
- The department or work area where the exposure incident occurred.
- An explanation of how the incident occurred.

3. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses is prohibited in work areas where there is potential for exposure to blood, human cells or cell lines, bloodborne pathogens and OPIM. Food and drink are not kept in refrigerators, freezers, on countertops or in other storage areas where blood, human cells or cell lines, bloodborne pathogens or OPIM are present.

4. Mouth pipetting of blood, human cells or cell lines, bloodborne pathogens and OPIM, is prohibited.

5. All procedures involving blood, human cells or cell lines, bloodborne

pathogens and OPIM are performed in such a manner as to minimize splashing, spraying, spattering, or other actions generating droplets.

6. Blood, bloodborne pathogens and OPIM shall be placed in a container which prevents leakage during collection, handling, processing, storage, or transport.
7. The above containers are appropriately labeled and closed for handling and storing specimens of blood, bloodborne pathogens and OPIM. If outside contamination of a primary specimen container occurs, that container is placed within a second leak-proof container appropriately labeled for handling and storage. If the primary specimen container is not puncture -resistant, the secondary container must be puncture- resistant.
8. Transport of blood, bloodborne pathogens and OPIM within the University will be in primary and secondary containers. Containers must be:
    - Leak-proof and closable.
    - Labelled with appropriate biohazard label.
    - Puncture-resistant, when necessary.
9. Under NO circumstances may public transportation (e.g., UMN buses or shuttles, Twin Cities buses, private taxis, Light Rail Transportation (LRT), etc.) be used for transport of biohazardous materials.
10. Shipping of blood, bloodborne pathogen or OPIM outside the University shall only be done by individuals trained by Health, Safety, and Risk Management. Training is required every two years.
11. Equipment that becomes contaminated will be decontaminated prior to servicing or shipping. If decontamination is not feasible, an appropriate biohazard warning label will be attached to identify the type of contamination and the contaminated areas. Before equipment is handled, serviced, or shipped, contamination information will be conveyed to all affected employees, the intended equipment receiver, and any equipment service representative. Equipment that is slated for disposal or recycling must be appropriately labeled with the ReUse Program Instructions form.

D. **Personal Protective Equipment**

1. The lab manager or work unit supervisor is responsible for ensuring that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided. Personal protective equipment is provided at no cost to the employee. This equipment may include, but is not limited to:
    a. Gloves (preferably non-latex, e.g., nitrile)
    b. Disposable gowns and lab coats
    c. Face shields/masks
    d. Safety glasses/goggles
    e. Mouthpieces/resuscitation bags/pocket masks or other ventilation devices
    f. Hoods and shoe covers
2. Employees are trained regarding the use of the appropriate personal protective equipment for the tasks/procedures they perform. If necessary, additional training is provided when an employee takes a new position or is assigned new tasks/procedures. To determine whether additional training is needed, the employee's previous job classification and functions are compared to their new job classification or functions. Any needed training is provided by the employee's department and/or supervisor.
3. Personal protective equipment must be free from contamination and in good condition to protect employees from potential exposures. To ensure personal protective equipment is in good working order, the following practices must be utilized:
    a. All personal protective equipment is inspected periodically and repaired or replaced as needed to maintain effectiveness.
    b. Reusable personal protective equipment is cleaned, laundered, and/or decontaminated as needed.
    c. The employer is responsible for providing lab coats and a lab coat laundering service. The University has laundry service

contractors for individual labs to use if laundry service is not provided. Disposable lab coats are also acceptable.

d. Single-use personal protective equipment (or equipment that cannot be decontaminated) is disposed of as outlined in the University's *Biohazardous and Pathological Waste Management Plan*.

4. To ensure that personal protective equipment is used as effectively as possible, employees will adhere to the following practices:
    a. Any garments penetrated by blood, human cells or cell lines, bloodborne pathogens or OPIM will be removed immediately, or as soon as feasible.
    b. All personal protective equipment will be removed prior to leaving the work area. It shall be placed in the appropriate designated area or container for storage, washing, decontamination or disposal.
    c. Gloves will be worn:
        - Whenever employees anticipate hand contact with blood, human cells or cell lines, bloodborne pathogens or OPIM.
        - When performing vascular access procedures.
        - When handling or touching potentially contaminated items or surfaces.
    d. Disposable gloves are replaced as soon as practical after contamination, or if torn, punctured, or compromised in their ability to function as an "exposure barrier." Disposable (single use) gloves are not washed or decontaminated for re-use.
    e. Utility gloves may be decontaminated for reuse unless they are cracked, peeling, torn, or exhibit other signs of deterioration, at which time they must be disposed of.
    f. N95 respirators or equivalent, in combination with eye protection such as goggles or glasses with solid side shields, or chin-length face shields, are used whenever splashes, sprays, or droplet generation of blood, bloodborne pathogens or OPIM can be reasonably anticipated. If use of N95 respirator

is mandatory per SOP, visit HSRM website to complete the Respiratory Protection Program Requirements.

g. Protective clothing is worn whenever potential exposure to the body is anticipated. Type and characteristics of protective clothing will depend on the task and the degree of exposure that is anticipated.

h. Surgical caps/hoods and/or shoe covers/boots are used in any instances where "gross contamination" is anticipated.

E. **Housekeeping and Waste Disposal**

Departments and lab staff, with the assistance of custodial services or other assigned employees as needed, will ensure that the worksite is maintained in a clean and sanitary condition.

1. All equipment and surfaces are cleaned and decontaminated immediately, or as soon as possible, after spills or other contact with blood, OPIM or other potentially hazardous biological agents.
2. All potentially contaminated work surfaces are decontaminated at the completion of procedures and at the end of each work shift.
3. Disposable protective coverings for equipment are removed and disposed of as biohazardous waste and replaced as soon as possible after spills or other contact with blood, bloodborne pathogens OPIM, and after the work shift if the covering may have become contaminated.
4. All containers or protective coverings for reuse are inspected, cleaned, and decontaminated with an appropriate disinfectant as soon as possible if potentially contaminated.
5. Potentially contaminated broken glassware is picked up using mechanical means (such as a dustpan and brush, or tongs/forceps) and disposed of in proper sharps containers.
6. All infectious waste, including regulated waste (see Section IV Definitions), is disposed of according to the University's *Biohazardous and Pathological Waste Management Plan*, which is in compliance with the *OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030* (d)(4)(iii)(B).

IX. HIV AND HBV RESEARCH LABORATORIES AND PRODUCTION FACILITIES

A. There are no HIV or HBV large scale production facilities at the University.

B. The following procedures must be followed in addition to the requirements of the *OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030* and apply to research laboratories engaged in culture, production , concentration, experimentation, and manipulation of HIV and HBV. They do not apply to clinical or diagnostic laboratories solely engaged in the analysis of blood, tissues, or organs:

1. Assigned laboratory space and work practices for HIV and HBV teaching activities and research must be approved by the Institutional Biosafety Committee (IBC).
2. All waste is decontaminated by autoclaving or decontaminated with an appropriate disinfectant then placed in a red bag for disposal by a licensed contractor.
3. Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leak-proof, labeled, or color-coded container that is closed before being removed from the work area.
4. Laboratory doors must be kept closed when work involving HIV or HBV is in progress.

   Access to work area must be limited to authorized persons only. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.

5. A biohazard sign must be posted on all access doors.
6. All work must be conducted in biological safety cabinets or other appropriate containment devices. Working on the open bench is prohibited. Biological Safety Cabinets will be certified when installed, when moved, and at least annually.
7. Appropriate protective clothing must be worn while working in the lab, then removed before leaving the work area and decontaminated before

laundering.

8. Vacuum lines must be protected with liquid disinfectant traps and in-line HEPA filters.
9. Use of needles and syringes must be limited to situations where there is no feasible alternative. Only needle-locking syringes or other safety engineered sharps shall be used.
10. All spills must be immediately contained and cleaned up only by individuals trained and equipped to work with potentially concentrated infectious materials.
11. A Job-Specific standard operating procedure (SOP) must be prepared, adopted, reviewed, and updated at least annually or more often if necessary. Personnel must be advised of potential hazards, be required to read instructions on safe practices and procedures and be required to follow them.
12. All activities that pose a threat of exposure to droplets, splashes, spills, or aerosols must use appropriate combinations of biological safety cabinets, personal protective equipment, and secondary containment devices such as centrifuge safety cups, sealed centrifuge rotors, and isolator cages for animals.

C. The following facility requirements must be met for HIV and HBV labs.
   1. Each laboratory must contain a sink for hand washing and have a safety eyewash readily available within the work area.
   2. An autoclave shall be available for decontaminating regulated waste. If an autoclave is not available, approved SOPs for waste handling and decontamination procedures must be strictly followed.

D. For training requirements, see Section XIII, Training and Record Keeping.

X. HEPATITIS B IMMUNIZATION

Hepatitis B immunization is offered by the employer after initial Bloodborne Pathogen Training and within 10 days of work assignment to all employees who have the potential for occupational exposure to bloodborne pathogens as defined by *OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030*. The vaccination series is strongly encouraged unless the

employee has previously received the complete hepatitis B series, antibody testing has revealed that the employee is immune, the vaccine is contraindicated for medical reasons, or the employee declines the immunization.

The immunization consists of a series of two inoculations that are four weeks apart and is provided to employees at no cost. There are a few instances where someone will receive a 3 dose vaccination series:

- Pregnant women
- Already started the three-dose vaccination series
- Under the age of 18

HealthPartners Occupational and Environmental Medicine (HPOEM) will provide immunization at no cost to the employee after a departmental EFS number is presented to the Biosafety and Occupational Health Department (BOHD) at uohs@umn.edu. Visit the BOHD Clinical Services page for clinic locations and appointment information. If the employee declines the vaccine, a Declination Form (Appendix B) must be signed and kept in the employee's file. There is also an opportunity to decline the vaccine as part of the University's online Bloodborne Pathogens Annual OSHA Requirement (UHS 110) module. If the employee declines to be vaccinated, they may accept vaccination at any later date while they are covered under this plan.

Information regarding the vaccination program, including safety and effectiveness, is part of online Bloodborne Pathogens Annual OSHA Requirement (UHS 110) module.

XI. FIRST AID, INCIDENT REPORTING, AND POST-EXPOSURE EVALUATION

A. Administer First Aid. Encourage needle sticks and cuts to bleed; gently wash with soap and water for 15 minutes; flush splashes to the nose, mouth, or skin, with water; and flush eyes at the nearest eyewash station with clean water for 15 minutes. Seek medical attention immediately.
B. For incidents or potential exposures that occur during fieldwork or when sink or

eyewash is not available, please follow the guidance in Section J of the UMN Field Research Safety Program.

C. Incidents are reported to the worker's supervisor as soon as possible and a First Report of Injury (eFROI) is completed.

D. If an incident has occurred during work on a protocol approved by the IBC, report the incident to the IBC using the eProtocol system as soon as possible after accident response procedures have been followed.

E. If an incident has occurred in a BSL-3 facility, it must be reported to the BSL-3 lab manager and an additional BSL-3 incident report form must be completed.

F. Following a report of potential or overt exposure incident, the employee is provided confidential medical treatment, evaluation, and follow-up under the supervision of a licensed physician or other licensed health care professional. Tests are conducted by an accredited laboratory at no charge to the employee. Emergency care can be obtained at the nearest emergency provider, or from one of the providers listed on the BOHD Clinical Services website. Post-exposure evaluation and follow-up to bloodborne pathogen exposure can be done by one of the providers listed, or another provider and must include:

   1. Documentation of the routes(s) of exposure and the circumstances under which the exposure incident occurred.
   2. Identification and documentation of the source and/or individual, unless it can be established that identification is infeasible or prohibited by state or local law.
   3. The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the University shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.
   4. If the source individual is already known to be infected with HBV or HIV, testing need not be repeated.
   5. Results of source individual's testing shall be made available to the exposed

employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

6. If the employee agrees to blood collection and testing following an exposure incident, it will be done as soon as possible after consent is given.
7. If the employee consents to baseline blood collection at the time of the exposure but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.
8. An exposed employee will be offered:
    a. Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service
    b. Counseling
    c. Evaluation of subsequent reported illnesses

G. The employee's supervisor must investigate the circumstances surrounding the incident to determine what action (training, change in work practice, engineering controls, etc.) must be taken in order to prevent similar incidents in the future.

H. The University's occupational health provider is responsible for maintaining employee medical records according to OSHA regulations. All medical records are confidential; information will not be disclosed without the employee's written consent. Medical records, with regards to an occupational exposure, will be maintained for at least the duration of employment plus 30 years.

Record-keeping and/or reporting for occupational bloodborne pathogen exposures will be in compliance with *OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030* (d) (2)(i) and as directed by BOHD as follows:

1. Depending on the circumstances, injuries involving bloodborne pathogens may be recordable by OSHA and entered on the OSHA 300 Log (see CFR

1904.8).

2. The employee's medical provider will generate a work ability report where applicable. The report will be submitted to the employee's supervisor and the Office of Risk Management and Insurance.
3. Sedgwick, the University's claim management service, will work with the Office of Risk Management and Insurance as needed regarding missing or incomplete information for Workers Compensation claims.
4. Employee medical records and test results are documented by the employee's medical provider and subject to HIPAA privacy rules.
5. Depending on the circumstances, employees may be asked to complete post exposure patient questionnaires or other appropriate forms as determined by the medical provider.

XII. LABELS AND SIGNS FOR HAZARD COMMUNICATION

Biohazard warning labels and signs are used to communicate hazards to employees. Labels and signs display the biohazard symbol and are colored fluorescent orange or orange red.

A. Labels are affixed to:
    1. Biohazard waste containers, sharps disposal containers, laundry bags
    2. Other containers used to store, transport, or ship blood and other potentially infectious materials.
    3. Refrigerators/freezers, incubators containing blood, human cells/cell lines, or other potentially infectious materials
    4. Other potentially contaminated equipment or instruments
B. Biohazard signs are posted at entrances to all biological research laboratories including HIV and HBV. The sign must indicate whether any special requirements are needed for entry and the name and phone number(s) of the lab director or other responsible person.

XIII. TRAINING AND RECORDKEEPING

It is the responsibility of individual departments to identify employees who need training and ensure that training is completed. Bloodborne Pathogen Training is required annually for all employees who are at risk for exposure to bloodborne pathogens (See Appendix A).

Covered employees must complete Bloodborne Pathogen Training at the time of initial assignment and at least annually thereafter. All new employees, as well as employees changing jobs or job functions, must receive additional **Job-Specific Training** prior to beginning new work assignments.

A. Training material must include but not be limited to:
    1. An accessible copy of the *OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030*
    2. The epidemiology and symptoms of bloodborne and other diseases
    3. The modes of transmission of bloodborne and other pathogens
    4. This *Exposure Control Plan for Bloodborne Pathogens*
    5. Appropriate methods such as performing a risk assessment for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
    6. A review of the use and limitations of methods that will prevent or reduce exposure, including:
        a. Engineering controls
        b. Work practice controls
        c. Personal protective equipment
    7. Selection and use of personal protective equipment including:
        a. Types available and location
        b. Proper use
        c. Removal and handling
        d. Decontamination and disposal
    8. An explanation of biohazard labels, signs, and "color-coded" containers
    9. Information on the hepatitis B vaccine, including:
        a. Efficacy and safety
        b. Method of administration
        c. Benefits of vaccination
        d. Offering of the vaccine at no cost to the employee
        e. The option for declination of hepatitis B vaccination (See Appendix B)

10. Post exposure evaluation procedures as outlined in Section XI above.

B. In addition to the training outline above, employees in HBV and HIV research labs must:

1. Demonstrate proficiency in standard microbiological techniques and techniques specific to the job tasks.
2. Have prior experience handling human pathogens or tissue cultures or be provided with a training program beginning with non-infectious agents and progressing as proficiency is developed.

C. Training Methods

The following types of training, *by themselves* *do not constitute training*, and do not comply with this program or the regulation:

1. Giving an employee a data sheet, package insert, reference manual or any other printed material to read.
2. Watching video or computer-delivered presentations, especially when the material in the video is not specific to the operation and hazards at hand.
3. Any type of training which does not include an opportunity for employees to ask questions to ensure they understand the information presented to them.

Note: Audiovisuals, interactive videos, printed materials, etc., may be used as a component of Bloodborne Pathogens Training, but the training must be supplemented by Job-Specific Training that includes information related to the employee's job duties, potential exposures, and provides them with the opportunity to ask questions.

D. Training Records

Training records from the online Bloodborne Pathogen course are automatically saved in the UM Reports. Job-Specific Training records must be kept by work unit supervisors.

Some departments (UMPD and On-Campus Childcare services are examples) have specific Bloodborne Pathogen training and must keep their own records.

XIV. ANNUAL REVIEW OF THE POLICY

An annual review of the policy shall be conducted by the Biosafety and Occupational Health Department to ensure that the current written program is up to date.

APPENDIX A
EXPOSURE DETERMINATION BY JOB CLASSIFICATION

All of the following job classifications require employees to perform procedures or occupation- related tasks that involve exposure, or the potential for exposure to blood, bloodborne pathogens or OPIM. These classifications may also include tasks that involve the potential for spills or splashes of the same.

EXAMPLES OF JOB CLASSIFICATIONS IN WHICH ALL EMPLOYEES HAVE OCCUPATIONAL EXPOSURE

- Anatomical Preparation Technician
- Anesthesiologist
- Assistant Athletic Equipment Manager
- Assistant IM Director
- Athletic Equipment Manager
- Chemical and Biosafety Officer
- Clinic Aide
- Clinical Laboratory Staff
- Clinical Nurse
- Cytogenetic Laboratory Director
- Cytogenetic Laboratory Manager
- Cytogenetic Laboratory Technician I
- Cytogenetic Laboratory Technician II
- Dental Hygienist
- Physicist
- Hospital Nurse
- Immunization Clinic Coordinator
- Industrial Hygienist
- Laundry Worker I
- Laundry Worker II
- Licensed Practical Nurse
- Maxillofacial Surgeon Nurse
- Nurse CLN I
- Nurse CLN II
- Nurse CLN Manager
- Nurse Practitioner

- OB\GYN Surgeon
- Occupation Health Physician
- Optometrist
- Orthopedic Surgeon
- Physician
- Physician Assistant
- Public Safety Personnel
- Radiation Safety Officer
- Resident/Instructor Safety Technician
- Staff Athletic Trainer
- Staff Dentist
- Staff Physician
- Health Student
- Athletic Aid
- Athletic Trainer
- Surgeon, M.D.
- Surgical Resident, M.D.
- Urological Surgeon

EXAMPLES OF JOB CLASSIFICATIONS IN WHICH SOME OF THE EMPLOYEES MAY HAVE OCCUPATIONAL EXPOSURE

Job Classification

- Accounting Clerk
- Associate Intramural Director
- Assistant Professor
- Associate Professor
- Assistant Scientist
- Athletic Staff Trainer
- Athletic Student Trainer
- Community Health Association
- Custodian/employees assigned to custodial work
- Electron Microscopist I
- Graduate Assistant Health Care Aide
- Health Care Assistant
- Histological Tech
- Junior Scientist Laboratory Attendant I
- Laboratory Supervisor
- Laboratory Tech

- Maintenance Worker
- Pipefitter/Plumber
- Research Assistant
- Research Associate
- Research Fellow Scientist
- Senior Scientist

Task

- Handle shipping/receiving of human samples
- General first aid
- Handles and/or processes human blood and tissue samples
- First aid and treatment of athletic injuries
- Draws blood
- Cleans and disinfects work areas where hazards might exist
- Housekeeping
- Direct contact with patients
- Vascular access
- Maintains item that may be contaminated
- Deals with contaminated lines

APPENDIX B

HEPATITIS B IMMUNIZATION DECLINATION

I understand that due to my occupational exposure to blood, bloodborne pathogens or OPIM I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be immunized with hepatitis B vaccine, at no charge to myself. However, I decline the hepatitis B immunization at this time, and understand that by declining this immunization I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have potential occupational exposure to blood, bloodborne pathogens or OPIM and I want to be immunized with the hepatitis B vaccine, I can receive the immunization series at no charge to me.

Print Name: _____

Signature: _____

Date: _____