

BLOODBORNE PATHOGENS EXPOSURE CONTROL PLAN

Principal Investigator or Supervisor: [Click here to enter text.](#)

Department: [Click here to enter text.](#) **Date:** [Click here to enter a date.](#)

I. EXPOSURE DETERMINATION:

A. The materials used in this work setting that may cause exposure to bloodborne pathogens include the following:

- Human blood, serum, plasma, blood products, components, or cells
- Human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and any body fluid visibly contaminated with blood, and all body fluids in situations where it is difficult to differentiate between fluids such as emergency response
- Any unfixed human tissue or organ (other than intact skin)
- Cell, tissue, or organ cultures derived from humans
- Animals with human xenografts including their blood, tissue and organs

B. Identify the personnel with occupational exposure to bloodborne pathogens (include those that work with human established cell lines). For Human Immunodeficiency Virus (HIV), Hepatitis B (HBV), and Hepatitis C (HCV) research laboratories please identify personnel and their training in section III, 6.

Name	Job Title

C. The tasks and procedures used in this laboratory which may pose risk of exposure to human bloodborne pathogens include the following:

- Phlebotomy or venipuncture of humans
- Injections into humans or into animals using human specimens
- Other use of needles with human specimens
- Preparing, dissecting, cutting, or otherwise handling human tissue
- Pipetting, mixing, or vortexing human blood, body fluids, or cell cultures
- Centrifuging human blood, body fluids, or cell cultures
- Handling tubes or other containers of human blood, body fluids, or cell cultures
- Handling contaminated sharps or other contaminated waste
- Cleaning up spills of human blood or body fluids
- Preparing or handling primary or established human cell cultures
- Collection and processing of containerized Biohazardous waste.
- Other: please describe:

II. METHODS OF COMPLIANCE:

Engineering and work practice controls shall be used to eliminate or minimize exposure. Where occupational exposure remains after implementation of these controls, personal protective equipment shall also be used. Personal protective equipment must prevent blood or other potentially infectious material from reaching their street clothes, skin, eyes, mouth, or other mucous membranes, under normal conditions or reasonably foreseeable accident.

A. Engineering Controls

- Biosafety cabinets
- Sealed centrifuge rotors
- Sealed centrifuge safety cups
- Fume hoods
- Sharps containers
- Bench top splash shields
- Still air box
- Autoclave
- Other: please describe:

B. Personal Protective Equipment

- Laboratory coats
- Disposable gowns
- Disposable gloves
- Utility gloves
- Safety glasses
- Goggles
- Mask
- Face shields
- Other: please describe:

C. Housekeeping: The work site is maintained in a clean and sanitary condition. Overtly contaminated surfaces must be decontaminated as soon as feasible. Potentially contaminated surfaces shall be decontaminated at the end of the work shift. Disinfectants used must have a current CAL-EPA registration for use as a disinfectant. **(70% ethanol is not permitted** to be used as a disinfectant in the state of California; however it can be used as a cleaner.)

AREA	DISINFECTANT (Provide concentration)	CONTACT TIME (minutes)
Benches:		
Biosafety cabinets:		
Other:		

D. Engineered sharps protection is required for all use of sharps with blood or other potentially infectious materials.* We use the following engineered sharps protection:

- No work involves sharps and blood or other potentially infectious materials*
- Needle-free injectors
- Self-sheathing scalpels
- Self-sheathing hollow bore needles
- Self-sheathing injectable needles
- Self-sheathing intravenous catheters
- Self-sheathing vacutainer needles
- Plastic vacutainer tubes
- Plastic coated hematocrit tubes
- Other: please describe:

*Exceptions to this requirement are allowed for market availability, patient safety, safety performance, or lack of safety performance data. If you wish to submit an exception justification, contact the EH&S Biosafety Office: ehsbio@ucsd.edu. Written justification must be approved by the UCSD Institutional Biosafety Committee.

E. General Work Practice Controls

1. Universal Precautions is a method of infection control in which all human blood, tissue, and body fluids are treated as if known to be infectious for HIV, HBV, HCB, or other bloodborne pathogens.
2. Hand washing: Personnel wash their hands frequently while working with biohazardous agents, immediately after removing gloves, and immediately upon any contact with blood or other potentially infectious material.
3. Mouth pipetting or mouth suctioning is strictly prohibited.
4. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas. Never put anything (pen, pencil, pipette, etc.) into your mouth.
5. Food and drink are not stored in refrigerators, freezers, shelves, cabinets, bench tops, ovens, or microwaves where blood or other potentially infectious materials are kept or may be present.
6. Used needles and other sharps are not sheared, bent, broken, recapped, or re-sheathed by hand. Used needles are not removed from disposable syringes. Contaminated sharps are placed immediately in a puncture-resistant and labeled sharps container.
7. Leak-resistant containers are used during the collection, handling, processing, storage, transport, or shipping of blood specimens and other potentially infectious materials. The containers are appropriately labeled or color-coded and are closed prior to transport. If outside contamination could occur, the primary container is placed in a second container, which prevents leakage.
8. Engineering controls are examined and maintained on a regular schedule to ensure their effectiveness. Biological safety cabinets (BSC's) are checked for proper functioning each time they are used. The biosafety cabinet must be certified annually and the inspection record posted on the biosafety cabinet.
9. All equipment is examined prior to servicing or shipping and is decontaminated as necessary. Contact the Research Assistance Program ehsrap@ucsd.edu for clearance of all equipment used for handling, processing, or storage of human blood or other potentially infectious materials.
10. Broken glassware is not picked up directly with the hands. It must be cleaned using mechanical means, such as a brush and dustpan, tongs, or forceps.
11. All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving. Biomedical waste is handled according to the standards of good laboratory practice and the UCSD biohazardous and medical waste guidelines, which are in compliance with state law.
12. All personal protective equipment (PPE) must be inspected, cleaned, or replaced as needed in order to maintain its effectiveness. This will be done at no cost to laboratory personnel. At no time will workers be expected to take home any PPE, including lab coats, for laundering or cleaning.
13. All work areas and containers are labeled in accordance with the provisions of the Bloodborne Pathogens Standard. Labels used in this laboratory for human blood and other potentially infectious materials must include the international biohazard symbol and the term "biohazard," and must be fluorescent orange or orange-red in color.
14. Vacuum lines are protected with liquid disinfectant traps and HEPA filters. The filters must be routinely checked monthly, and maintained or replaced as necessary.
15. All spills are immediately contained and cleaned by properly trained staff. Any spills or accidents that result in exposure are immediately reported to the principal investigator (PI) or his or her designee. For large spills contact EH&S at (858) 534-3660.

III. HIV, HBV, AND HCV RESEARCH LABORATORIES:

Additional requirements apply to laboratories engaged in the culture, production, concentration, experimentation, and manipulation of HIV, HBV, or HCV.

Currently, UCSD has HIV laboratories that work at both BSL-2+ and BSL-3 practices, safety equipment, and facilities. UCSD has Hepatitis C laboratories that work at BSL-2+ practices, safety equipment, and facilities. There are no research laboratories handling Hepatitis B. If that changes, this section will be updated.

The following are the BSL-2+ practices:

1. All activities involving potentially infectious materials shall be conducted in a biological safety cabinet; no work with these materials shall be conducted on the open bench.
2. Centrifuges must be equipped with either sealed rotor heads or centrifuge safety cups.
3. Laboratory coats must be decontaminated by steam sterilizing prior to laundering. Disposable gowns can be worn instead of laboratory coats. Gowns can be disposed of as bio-hazardous waste.
4. If laboratory coats or gowns do not have knit cuffs, tyvek sleeve covers must be used to prevent bare skin exposure.
5. Hypodermic needles and syringes shall be used only for parenteral injection and aspiration of fluids from animals and diaphragm bottles. All sharps (needles, blades, etc.) must have engineered sharps protection.
6. In addition to required Bloodborne Pathogen training, there must be a proficiency check and documented experience working with human tissue cultures or human pathogens before an employee is allowed to work with HIV, HBV, or HCV. The experience should be documented by a short biographical sketch that describes previous experience. If an employee does not have experience working with human tissue cultures or pathogens, the employer shall assign work activities with tissue cultures or risk group 1 materials that develop techniques and proficiency. Only after proficiency is demonstrated, should employees be allowed to handle HIV, HBV, or HCV agents.

NAME	Job Title	PROFICIENCY CHECKED (initials/date)	PREVIOUS EXPERIENCE with human tissue culture or pathogens (yes/no)

IV. PROCEDURE, POST-EXPOSURE EVALUATION AND FOLLOW-UP:

- A. If you have an exposure incident:** Immediately wash the affected body part with soap and water. Use the eyewash for splashes to the eyes. If the exposure occurs during normal work hours, proceed directly to Thornton or UCSD Medical Center Emergency Department and tell them you have had an occupational exposure involving bloodborne pathogens.
- B. Post-Exposure Evaluation and Follow-up:** An exposure incident is any situation such as a spill, splash, needle stick, ingestion, or accident in which you have direct, unprotected contact with human blood, body fluids, or other potentially infectious materials. If this happens, you have the right to medical evaluation and treatment. These post-exposure services will be furnished to you at no cost to you, in accordance with the Bloodborne Pathogens Standard. Prompt medical attention is important and may reduce the risk of serious health consequences after an exposure incident. The medical evaluation is confidential.

If you would like the medical evaluation to be provided by a health care provider other than the employer (UCSD), call Risk Management at (858) 822-2979 for campus-funded employees or (619) 543-7877 for UCSD Healthcare-funded employees.

V. REPORTING OF EXPOSURE INCIDENTS:

Every individual has the responsibility to report any exposure to human blood and other potentially infectious materials to:

- Risk Management - Campus-funded employees, call (858) 822-2979
- Risk Management - UCSD Healthcare-funded employees, call (619) 543-7877

- A. Complete and submit** the Employee Occupational Incident Report form **immediately** after seeking medical attention for your injury or exposure. For more information and to find the form, go to [What to Do if a Work-Related Injury, Illness, or Exposure Occurs](#). For information on [Worker's Compensation](#) contact: (858)822-2979 or (858)534-4785 for campus-funded employees, or (619)543-7877 UCSD Medical Center-funded employees, call.
- B.** Report your exposure to your supervisor either in person, via e-mail, or over the telephone.

VI. HEPATITIS B VACCINATION:

The UCSD Center for Occupational Environmental Medicine (COEM) will provide appropriate required medical services.

- A. Hepatitis B Vaccination:** The PI/Manager will ensure that all persons in the laboratory/unit area who are determined to have occupational exposure to human bloodborne pathogens (see Section I-B) are offered Hepatitis B vaccination within ten days of starting work. Hepatitis B vaccination is an effective preventive measure against Hepatitis B infection, a serious disease which may lead to liver cancer and death.

To receive your vaccination, contact the Center for Occupational & Environmental Medicine (COEM) to make an appointment:

- **COEM – Campus – (858)657-1600, 8899 University Center Lane, Suite 160, San Diego, CA 92122** ([PDF map](#))
Note: The Nobel Shuttle comes within about 2 blocks from the clinic - corner of Lebon and Nobel.
Monday–Friday, 8 a.m. – 4:30 p.m.
- **COEM – Hillcrest – (619)471-9210, 330 Lewis Street, Suite 100, San Diego, CA 92103** ([map](#))
Monday–Friday, 8 a.m. – 4:30 p.m.

A healthcare professional will discuss the benefits and risks of the vaccination. The vaccine must be provided at no cost to the employee. If the employee chooses not to be vaccinated, he or she must sign a declination form.

VII. COMMUNICATION OF HAZARDS TO EMPLOYEES:

- A. Information and Training:** Specific training is conducted or provided by the PI/Manager with general assistance from EH&S. General training of the main elements of the Bloodborne Pathogens Standard will be given by EH&S. Visit the [UC Learning Center](#) and use the course catalog or search box to locate the schedule for *Biosafety: Bloodborne Pathogens* training classes.

The first Bloodborne Pathogens training will occur within ten days of starting work with human specimens, and annually thereafter. Training must be documented. Records are maintained by the PI or the department for at least **three (3) years**.

- B. Signs and Labels:** All work areas and containers are labeled in accordance with the provisions of the Bloodborne Pathogens Standard. Labels used in this laboratory for human blood and other potentially infectious materials must include the international biohazard symbol and the term "biohazard," and must be fluorescent orange or orange-red in color. Signs, labels, and containers are available from UCSD Storehouse.

VIII. RECORDKEEPING:

The PI/Manager maintains all training records as specified in the Standard for at least three years. EH&S maintains the Hepatitis B Vaccine Declination forms for all employees. All medical records are maintained by COEM for thirty years. The Sharps Injury Log is maintained for five years from the date of the exposure incident.

IX. SHARPS INJURY LOG:

The Center for Occupational and Environmental Medicine shall maintain the Sharps Injury Log. The Log will record the following information:

- Date and time of the exposure incident
- Type and brand of sharp involved
- Description of the exposure incident

The exposure incidents shall be recorded within 14 working days of the date the incident was reported. The Sharps Injury Log shall protect the confidentiality of the injured person.

X. RESOURCES:

For more information about the OSHA Bloodborne Pathogens Standard or for assistance in compliance, please contact your supervisor, your PI, or email ehsbio@ucsd.edu.

Xi. FORM SUBMISSION:

Upon completion, please attach this form to the appropriate BUA. If you are unable to attach the form, email a copy to ehsbio@ucsd.edu.