

Environmental Health & Safety

(909) 469-5528; (909) 469-8231

**BLOODBORNE PATHOGENS and AEROSOL TRANSMISSABLE DISEASES**

**EXPOSURE CONTROL PLAN**

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| --- | --- | --- | --- |
| **Principal Investigator:** | | **Telephone:** | |
| **Building:** | **Room(s):** | | |
| **Department:** | | | **Date:** |

**Purpose**

In compliance with the California OSHA Bloodborne Pathogens Standard (CCR, Title 8, [Section 5193](https://www.dir.ca.gov/title8/5193.html)) and the California OSHA Aerosol Transmissible Diseases (ATD) Standard (CCR, Title 8, [Section 5199](http://www.dir.ca.gov/title8/5199.html)), this Exposure Control Plan (ECP) has been created to minimize or eliminate the exposure of all Western University of Health Sciences (WesternU) personnel to human or nonhuman blood or blood products that might contain bloodborne pathogens (BBP) and/or airborne pathogens.

**Responsibilities of the Investigator**

Each principal investigator (PI) will:

* Complete and annually update the ECP based on the nature of the activities being performed in their research lab(s). This plan must remain on file in a central location within the work place along with other relevant safety documents for all personnel to access.
* Assure that all faculty, staff and students in their facilities have successfully completed the on-line Biosafety 101 Bloodborne Pathogens training course on [Blackboard](https://bb.westernu.edu/). Once in Blackboard, you will need a user name and a password to enter the site. Once in, click on Faculty and Staff Training Center from the list of courses on the right side of the screen. After accessing the Training Center, click on Biosafety on the left side of the screen. Then click on Bloodborne Pathogens and begin. You must complete the quiz at the end of each of the seven sections.
* Ensure adequate supplies of personal protective equipment (PPE) and other necessary equipment to minimize exposure to BBP, other potentially infectious material (OPIM) and Aerosol Transmissible Pathogens (ATPs) during normal operations and emergency situations.
* Ensure that all eligible faculty, staff and students have protection against Hepatitis B. For those that have completed the vaccine series, a quantitative serum blood titer is required to determine level of immunity. For those whose titer is negative for immunity or they have not received or completed the hepatitis B virus (HBV) vaccine series must be offered the vaccine, at no cost to them, before beginning work with human or nonhuman blood or blood products that might contain BBP. Persons who decline the vaccine must fill out the [Vaccine Declination Statement](http://www.westernu.edu/bin/research/hepb_decline.pdf) and return it to the Student-Employee Health Office (SEHO) in Pomona, CA. Should the employee decide to receive the vaccine at a later time, they can do so at no cost.
* Ensure that all eligible faculty, staff and students have protection against aerosol transmitted diseases they will be working with, e.g., measles, mumps, varicella prior to the start of the research. If titers show they are not immune, employees shall be offered vaccinations, at no cost to them, for Aerosol Transmissible Pathogens – Laboratory (ATPs-L) as recommended by the Biosafety Officer, SEHO, and/or Occupational Health Provider. Employees who decline the vaccine(s) must fill out the [Vaccine Declination Statement](http://www.westernu.edu/bin/research/hepb_decline.pdf) and return it to the SEHO in Pomona, CA. Should the employee decide to receive the vaccine at a later time, they can do so at no cost.
* Ensure that all eligible faculty, staff and students that will be working with *Mycobacterium tuberculosis* (Mtb)have been tested for tuberculosis either through a skin test called PPD; a serum blood test called Quantiferon; or, a chest x-ray with completion of a TB symptoms checklist. If the employee has a prior history of positive PPD, they are required to obtain a chest x-ray (only once every 4 years) and complete the TB symptoms check list. All documentation must be sent to the SEHO in Pomona, CA. NOTE: TB clearance will be required every six (6) months, at minimum when working with Mtb.
* Ensure that all eligible faculty, staff and students have been fit tested to the appropriate respirator mask prior to starting work with the ATP. The respirator must be worn at all times while working with the ATP. Refer to the Injury and Illness Prevention Plan [Respiratory Protection Program](http://www.westernu.edu/bin/safety/plan-respiratory-protection.pdf) for more information on fit testing and the responsibilities of Department Heads, Supervisors and Principal Investigators.
* Ensure work with the ATPs listed in Appendix 4: Diseases/Pathogens Requiring Airborne Infection Isolation (AII), is performed in a biosafety cabinet or in a negative pressure room to prevent airborne transmission to others in the surrounding area.

http://www.wpclipart.com/telephone/old_fashioned_phone/phone_rotary_symbol.jpghttp://www.wpclipart.com/telephone/old_fashioned_phone/phone_rotary_symbol.jpgPersons who accept the vaccination offer can go to the Patient Care Center Pharmacy on the Pomona campus to obtain the vaccine(s). The PCC Pharmacy administers vaccinations Monday-Friday from 8am to 430pm. The vaccines will be charged to the appropriate department. If the employee prefers to obtain the vaccine at US Health Works, they will need to contact Human Resources Office ( 909-469-5372) to obtain authorization for medical treatment at US Healthworks Medical Group, 801 Corporate Center Dr., Suite 130, Pomona, CA ( 909-623-1954). Their hours are Monday-Friday 7:30 AM – 6:00 PM. The employee may choose to accept ATP-L vaccination offer even if they originally declined the offer.

**Campus Biosafety Officer**

WesternU’s Biosafety Officer is qualified by training and experience to evaluate hazards associated with laboratory procedures involving BBPs and ATPs-L and is authorized by WesternU to establish and implement effective control measures, in consultation with the Institutional Biosafety Committee, for laboratory biological hazards. Questions regarding the vaccination offer or any other aspect of this ECP may be directed to WesternU’s Biosafety Officer.

Sheila Redjai, MPH

Biosafety Officer

Environmental Health and Safety

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**Exposure Determination – Source materials of potential BBP exposure:** Mark all material used in your work area that may result in personnel exposure to bloodborne pathogens.

Human blood  Human blood components  Human blood products

Unfixed human tissue  Unfixed human organs  Herpes B virus

Established human or nonhuman primate cell lines

Materials infected with HIV, HBV, HCV

Cell/tissue/organ cultures from humans or experimental animals

Experimental animal blood, organs or tissue

Culture growth media/solutions

Amniotic fluid  Cerebrospinal fluid  Synovial fluid  Pleural fluid

Pericardial fluid  Peritoneal fluid  Vaginal secretions  Semen

Saliva in dental procedures  Body fluids contaminated with blood (e.g. saliva or vomitus)

Body fluids where it is difficult to differentiate between fluids

Other Potentially Infectious Materials (OPIM): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Exposure Determination – Agents handled in the laboratory covered under the ATD Standard:** List all agents used, type of specimen used, and estimated concentration in your work area that apply to the ATD Standard. The agents covered under the standard are listed in Appendix 3 at the end of this ECP. All incoming materials containing ATPs-L are to be treated as virulent or wild-type pathogen until procedures verifying that the pathogen has been deactivated or attenuated have been conducted.

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| --- | --- | --- |
| Agent  (e.g. Adenovirus 5) | Type of Specimen  (e.g. culture, clinical specimen) | Estimated Concentration  (e.g. 1 x 108) |
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**Mark the tasks and procedures performed in the laboratory and for procedures that require the use of personal protective equipment (PPE) and/or respiratory protection.**

|  |  |
| --- | --- |
| Bloodborne Pathogens/OPIM | ATPs-L (potential aerosol generating procedures)\* |
| Phlebotomy or venipuncture of humans or primates    Injections into humans or animals using primate or human specimens  Other use of needles with human or primate specimens  Pipetting, mixing, or handling human or primate blood, fluid, or tissue  Other procedures or tasks that would create risk of exposure to BBP’s  Centrifuging human or primate blood, fluid, or tissue  Handling human or primate tissue including preparation, dissection and cutting  Handling tubes or other container of human or primate blood, fluid, cultures, or tissue  Handling contaminated sharps or other contaminated waste  Cleaning spills of human or primate blood or other body fluids  First aid  First responder/HAZMAT  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Respirator:  Centrifugation  Required  Pipetting  Required  Vortexing  Required  Mixing  Required  Shaking  Required  Blending  Required  Grinding  Required  Sonicating  Required  Plating  Required  Pouring  Required  Flow cytometry  Required  Necropsy  Required  Sample collection  Required  Homogenizing  Required  Flaming inoculation loops  Required  Needle/syringe manipulations  Required  Animal handling (with ATPs-L)  Required  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Required  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Required |

\*All potential aerosol generating procedures with ATPs-L must be performed within a biosafety cabinet. Exceptions to this policy must be scientifically justified and approved by the Institutional Biosafety Committee.

**Mark all safety methods to be used:**

**Engineering Controls** **Personal protective Equipment** **Engineered Sharps Protection**

Biosafety cabinets  Laboratory coats  Needle-free injectors

Sealed centrifuge rotors  Disposable gowns  Self-sheathing scalpels

Safety cups  Disposable gloves  Self-sheathing hollow bore needles

Fume hoods  Utility gloves  Self-sheathing injectable needles

Sharps containers  Safety glasses  Self-sheathing intravenous catheter

Bench top splash shields  Goggles  Self-sheathing vacutainer needles

Enclosure  Face shields  Plastic vacutainer tubes

Local ventilation  Mask  Plastic coated hematocrit tubes

Hand washing sink  Disposable N95 respirator\*  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mechanical pipetting devices  PAPR\*

Capped centrifuge tubes  Other respirator\* (specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

http://www.wpclipart.com/telephone/old_fashioned_phone/phone_rotary_symbol.jpg\*Requires annual fit-testing and respirator training. Questions? Contact the Student-Employee Health Coordinator ( 909-469-3871) for more information.

**Potentially contaminated surfaces shall be decontaminated with a 1:10 household bleach solution followed by 70% isopropyl alcohol, each for a minimum of 5 minutes contact time, at the end of the work shift or more frequently as necessary.** Identify the laboratory work areas and indicate the frequency of decontamination.

|  |  |
| --- | --- |
| **Work Area** | **Decontamination Schedule** |
| Benches |  |
| Biosafety cabinets |  |
| Centrifuges |  |
| Incubators |  |
| Floor/walls |  |
| Fume Hood |  |
| Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |

**Exposure Determination:** All job classifications and locations in which employees, staff and students may be expected to incur occupational exposure to blood or other potentially infectious materials and/or ATPs-L, regardless of frequency, shall be identified and evaluated by the PI or lab manager and/or supervisor. This list shall be updated as job classifications or work situations change. Exposure determination shall be made without regard to the use of personal protective equipment (PPE) as persons are considered to be exposed even if they wear PPE.

**A. Category I**

Job classifications in which employees, staff and students are exposed to blood or OPIM and/or ATPs-L on a **REGULAR BASIS** and in which such exposures are considered as normal in the course of work fall into Category I. The PI or lab manager and/or supervisor shall maintain a list of these types of jobs and the locations in which the work will be performed (see table below).

|  |  |  |
| --- | --- | --- |
| **Job Classification:** (Ex: Lab Assistant; Postdoctoral/Research Associate; Dental Hygienist) | **Location where work will be performed:** | **Type of Exposure** |
|  |  | BBP or OPIM  ATP-L |
|  |  | BBP or OPIM  ATP-L |
|  |  | BBP or OPIM  ATP-L |
|  |  | BBP or OPIM  ATP-L |

**NOTE:** Part-time, temporary, contract and per diem employees are covered by the BBPs and ATDs Standards. The ECP should describe how the standard will be met for these employees.

**B. Category II**

Job classifications in which employees, staff and students may have **OCCASIONAL EXPOSURE** to blood or OPIM and/or ATPs-L, and in which such exposures occur only during certain tasks or procedures that are collateral to the normal job duties, fall into Category II. The PI or lab manager and/or supervisor shall maintain a list of these types of jobs and the locations in which the work may be performed (see table below).

|  |  |
| --- | --- |
| **Job Classification:** (Ex: Lab Assistant II; Hazardous Waste Technician) | **Task Procedure:** (Ex: testing human blood; working with mammalian cells; cleaning blood spills or OPIM) |
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**These lists shall be updated as job classifications or work situations change.**

**HIV, HBV and HCV Research Laboratories [required by 8CCR§5193(e)(1-3, 5)]**

The Cal/OSHA Bloodborne Pathogen Standard defines HIV, HBV, and HCV laboratories as those engaged in the culture, production, concentration, experimentation and manipulation of HIV, HBV or HCV. The use of these agents at WesternU shall be conducted at Animal Biosafety Laboratory level 3 (ABSL-3).

**HBV Vaccination Medical Surveillance Program [required by 8CCR§5193(f)(1-2) and 8CCR§5199(h) (1-2, 5)]**

Principal Investigators/ Non-Laboratory Supervisors are responsible for ensuring that all employees with potential occupational exposure to human bloodborne pathogens are offered the HBV vaccine and employees with potential occupational exposure to ATPs-L are offered any other applicable vaccinations at no charge to them. The HBV vaccine is an effective preventive measure against Hepatitis B infection. Vaccinations shall be made available to all employees with occupational exposures unless the employee has already received the vaccine or it is determined that the employee has immunity or that the vaccine is contraindicated for medical reasons. Supervisors or their designate must inform all new employees of the vaccination program as specified in the Bloodborne Pathogen Program and ATD Program Policy ***within 10 working days*** of their employment start date. If an employee declines to be vaccinated, the Supervisor must ensure that the employee signs the Vaccination Declination Statement (Appendix 2) and that a copy is on file with the Student-Employee Health Office. If the vaccine is unavailable, supervisors or their designate must document efforts made to obtain vaccine and inform employees of vaccine availability status. Vaccine availability must be checked at least every 30 calendar days and employees will be notified when the vaccine is available.

Check the boxes that apply indicating your compliance with this requirement and record the requested tracking information (i.e. DOCUMENTATION RECORDS?? RECORD WHERE?).

**ATD BBP**

All employees in this work area have been informed of the vaccination program *within 10*

*working days of their employment start date*. They have been offered the vaccine at no

charge and have been instructed on how to receive the vaccination.

For all current employees who have received the vaccine, medical confirmation is on file

with WesternU’s Student-Employee Health Office.

For all current employees who have declined the vaccine, an HBV Vaccination Declination

Statement is on file with WesternU’s Student-Employee Health Office.

If the recommended vaccine is not available, documentation of efforts to obtain the

vaccine is on file. Availability is checked at least every 60 calendar days. Employees

are informed of vaccine availability status.

**Recommended Vaccinations for ATPs-L:** *List all recommended vaccinations* for work with ATPs-L used in the laboratory.

|  |
| --- |
| vaccine        vaccine        vaccine |

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**Good Work Practice:**

1. Engineering and work practice controls shall be used to eliminate or minimize employee exposure and must be evaluated and maintained on a regular schedule to ensure their effectiveness. Use of sharps with infectious agents must be minimized.

2. Any experimental procedures that could possibly result in the generation of aerosols or other inhalation hazards shall be performed in a manner that will minimize transmission and/or aerosilization of airborne pathogens. For such procedures involving ATPs-L, sealed vessels, rotors or vials shall be used at all times.

3. Standard precautions is defined as an approach to infection prevention and control where all human/non-human primate blood and OPIM, tissues and cells are treated as if they were infectious.

4. Personal Protective Equipment (PPE): Where occupational exposure remains after the institution of engineering and work practice controls, the supervisor shall provide, at no cost to the employee, appropriate PPE. PPE will be considered “appropriate” only if it does not permit blood, other potentially infectious material (OPIM) or ATPs-L to pass through to or reach the employee’s work clothes, skin, eyes, mouth or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

5. Hand Hygiene: Personnel wash their hands frequently with soap and warm water while working with biohazardous agents, immediately after removing gloves and immediately upon any contact with blood, OPIM or ATPs-L-containing material.

6. **Prohibited Practices:**

i. Eating, drinking, smoking, chewing gum, applying cosmetics or lip balm and handling contact lenses in work areas where there is a reasonable likelihood of occupational exposure.

ii. Food and drink shall not be kept in refrigerators, freezers, shelves or cabinets or on countertops or benchtops where blood, OPIM or ATPs-L-containing materials are present.

iii. Mouth pipetting/suctioning of blood, OPIM or ATPs-L-containing materials.

iv. Sniffing *in vitro* cultures containing ATPs-L.

v. Placing your head in the biosafety cabinet.

vi. Used needles and other sharps cannot be sheared, bent, broken, recapped or re- sheathed by hand, removed from disposable syringes.

7. Signs and Labels: All work areas and containers are labeled in accordance with the provisions of the Bloodborne Pathogens Standard and/or Aerosol Transmissible Diseases Standard. Labels used in WesternU laboratories for human blood, OPIM and ATPs-L-containing materials must include the international biohazard symbol and the term “biohazard” and must be fluorescent orange or red in color.

8. Transportation on Campus: Specimens of blood, OPIM or ATPs-L-containing material will be placed in a primary container that prevents leakage (capped test tube, centrifuge tube, etc.) once collected, while handling and for storage. If the specimens are transported outside of the laboratory work site, the primary container must be placed in a labeled secondary container (bucket, beaker, cooler, etc.) which would contain the contents of the primary container if it were to leak or break.

http://www.wpclipart.com/telephone/old_fashioned_phone/phone_rotary_symbol.jpg9. Shipping of samples: Specimens and other materials to be transported between work sites shall be placed in a secondary container that is leak-proof and labeled with the universal biohazard symbol. Personnel involved with shipping of biohazardous agents or potential BBPs must have documented training BY WHOM? prior to shipping. Containers for shipping specimens must meet the Department of Transportation and United States Postal Service requirements. International shipping may require permits or authorization from the United States Department of Agriculture or Centers for Disease Control Contact the Biosafety Officer ( 909-824-9888) for additional information on training for shipping samples or specimens.

10.Sharps containers for contaminated sharps:

i. All sharps containers shall be rigid, puncture resistant, leak-proof, portable and correctly labeled.

ii. Containers for sharps shall be easily accessible to personnel and located as close as is feasible to where sharps are anticipated to be used.

iii. Contaminated sharps are to be placed into sharps containers immediately after use.

iv. Contents of the sharps container shall not be accessed. Sharps containers shall not be opened, emptied or cleaned manually or in any other manner that would expose employees to the risk of sharps injury.

v. Containers shall be replaced as necessary to prevent overfilling.

11.Biological Waste Disposal: All liquid waste (cultures, stocks and other regulated liquid waste) will be decontaminated by a 10% household bleach solution for a minimum contact time of 15-30 minutes prior to disposal down the sink with copious amounts of running water. The use of any other disinfectant must be approved by the Biosafety Committee prior to its use. Non-sharp medical waste must be placed in a red biohazard bag with the international biohazard symbol. Medical waste in red biohazard bags must be placed in a puncture resistant leak-proof secondary container with a closeable lid.

Spill Procedures: Never clean up a spill unless you have been trained and feel comfortable doing so.

Spill of Biological Agents within a Biosafety Cabinet:

1. Keep the biosafety cabinet running.
2. Don appropriate PPE for cleaning up the spill including gloves, lab coat, safety goggles.
3. Place absorbent materials on and around the spill (e.g. paper towels).
4. Apply an effective disinfectant (e.g. 1:10 dilution of bleach) to the spill and allow it to sit for the appropriate contact time (e.g. 15-30 minutes for bleach). Avoid splashing and creation of aerosols.
5. Ensure biohazardous waste bag/container is readily available.
6. Wipe up/clean the spill area.
7. Dispose of waste as biohazard waste container
8. Remove gloves, perform hand hygiene, and don fresh gloves.
9. Clean the area again. If using bleach as a disinfectant, do a final wash of the area with 70% isopropyl alcohol or water to prevent corrosion of your biosafety cabinet.
10. Remove PPEs and dispose in appropriate waste container.
11. Wash hands with soap and warm water.
12. Report the spill to your PI/Non-Laboratory Supervisor.

Spill of Biological Agents Outside of a Biosafety Cabinet (BSL-2 laboratories):

1. Notify all personnel in the area that a spill has occurred and evacuate everyone in the vicinity.
2. Close the door.
3. Remove any contaminated clothing and wash exposed areas with mild soap and water for 15 minutes.
4. Report details and/or request assistance from Environmental Health and Safety (EH&S) during business hours and after hours, call 911 or security at 909-706-3000 (or ext. 3000 if using university phone)..
5. Wait a minimum of 30 minutes to allow aerosols to settle or vent (this will allow for 3 complete air exchanges in the room to be completed).
6. Don appropriate PPE for cleaning up the spill including gloves, lab coat, safety goggles, and respirator, if spill involves the release of ATPs-L, prior to entry into the room.
7. Place absorbent materials on and around the spill (e.g. paper towels, cat litter).
8. Apply an effective disinfectant (e.g., 1:10 dilution of bleach) to the spill and allow it to sit for the appropriate contact time (e.g., 15-30 minutes for bleach). Avoid splashing and agitation of the spill as it can lead to aerosolization of the organism into the environment..
9. Wipe up/clean the spill area.
10. Dispose of waste as biohazard waste, remove gloves and perform hand hygiene.
11. Don clean pair of gloves and clean the area again.
12. Remove PPEs and dispose in appropriate waste container.
13. Wash hands with soap and warm water.
14. Report the spill to your PI/Non-Laboratory Supervisor.

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http://www.wpclipart.com/telephone/old_fashioned_phone/phone_rotary_symbol.jpgReporting and documentation of sharps injuries: All sharps-related injuries shall be reported immediately by completing WesternU’s “on-line incident report form. This form can be accessed at <https://webapp.westernu.edu/incident_report/> . Bloodborne pathogen exposure medical follow up forms can be obtained from the Student-Employee Health Office ( 909-706-3870) or at the WesternU Medical Center located in the Patient Care Center (PCC) in Pomona. If the exposure occurred on the Oregon Campus, employee can go to nearest healthcare provider for medical evaluation.

For employee exposures, the electronic Incident Report form automatically notifies the workers compensation coordinator in HR who will initiate a review of the injury and enter the information into a Sharps Injury Log (within 14 days of the injury). The Sharps Injury Log is maintained for five years by the EH&S. For student exposures, the online form automatically notifies University Risk Management of the exposure. The student should go to <http://www.westernu.edu/bin/risk-management/student-accident-secondary-claim.pdf> and complete the form in order to ensure all the necessary reporting has been completed.

MEDICAL SURVEILLANCE PROGRAM: WesternU’s Student-Employee Health Office has made arrangements for appropriate required medical services related to BBP exposures. The employee and student have the option of being seen/evaluated at the WesternU Medical Center in Pomona, if exposure occurred on or near campus. Otherwise, the employee/student has the option to be seen at the facility where the exposure occurred; US Health Works; or, their personal healthcare provider. and ATPs-L.

**1a. Hepatitis B Vaccination**: is recommended for those employees who will or are working with human blood/body fluids that may contain the Hepatitis B virus (HBV) and have no record of having received the vaccine in the past. Prior to receiving the vaccine, a serum blood titer may be performed to determine whether the employee has immunity to the HBV. If the titer shows the employee to be non-immune, the employee will be offered the vaccine series at no cost to the employee, Upon completion of the vaccine series, a post-vaccination serological testing will be performed to determine if immunity to hepatitis B has occurred. This, too is at no cost to the employee. The PI/Non-Laboratory Supervisor will assure that all personnel with potential for occupational exposure to BBP are offered the Hepatitis B (HBV) vaccination within ten working days of contact with human or primate specimens. **Students should be referred to the WesternU Student-Employee Health Office within ten-days of beginning work in the lab.**

**1b. Additional Recommended Vaccination(s):** will be made based on the organisms and risk of exposure the employee/student may have prior to beginning the research work. The employee may decline the recommended vaccination but can change their mind at a later date and receive the recommended vaccines at no cost to the employee. The PI/Non-Laboratory Supervisor will assure that all personnel with potential for occupational exposure to ATPs-L with available vaccinations are offered the vaccination within ten working days of initial assignment. **Students should be referred to the WesternU Student-Employee Health Office within the ten-days of beginning work in the lab.**

To obtain the vaccination(s), please contact HR for authorization for medical treatment at US Healthworks Medical Group, 801 Corporate Center Dr., Suite 130, in Pomona, CA.

Accepting a vaccination is not a condition of employment. Employees may decline any of the recommended vaccinations. Each employee who declines any of the recommended vaccinations is required to sign a declination form that will be filed in the Student-Employee Health Office.

**2. BBP/OPIM Post-Exposure Evaluation and Follow-up:**  It is recommended that the employee/student obtain prompt medical evaluation and treatment with a healthcare provider. If the exposure occurred while in the performance of work, these services will be provided at no cost to the employee. If a student is exposed, the student should also seek medical treatment. However, they are required to use their personal health insurance as initial source of payment. Any outstanding balance after the student’s health insurance company has paid must be submitted to the University Risk Manager for processing. The student must have reported the incident as described in the “Reporting and Documentation of Sharps Injuries Section of this document..

After any direct exposure to BBP/OPIMs or ATPs-L through a needlestick, immediately wash the affected area with soap and water and **NOTIFY YOUR SUPERVISOR**. For large splashes with BBP/OPIMs or ATPs-L, remove contaminated clothing and dispose as biohazard waste. Using the Shower station in the lab, rinse the affected area for at least 15 minutes. Obtain clothing and seek medical attention. If ATPs-L inhalation has occurred, seek medical attention.

If an employee exposure to ATPs-L occurs, the PI/Non-Laboratory Supervisor will immediately report the incident to the Workers Compensation Coordinator in Human Resources Office and complete the online Incident Report form. HR will review the exposure incident to determine which employees had significant exposures, the names and employee identifiers for such individuals and, if applicable, the basis for determination that an employee did not have a significant exposure or because it was determined prior to starting the research project, that the employee is immune. The PI/Non-Laboratory Supervisor will notify all employees who had a significant exposure of the date, time and nature of the incident within 72 hours of becoming aware of the potential exposure or sooner if the disease has time restraints for administration of immune globulin or other forms of prophylaxis. Employees will be provided post-exposure medical evaluation at no cost to the employee as soon as feasible.

Questions? Contact HR, University Risk Management or Student-Employee Health Office.

**Exposure to animal bites and scratches:** Wounds must be cleansed immediately in your work area. If wound is bleeding, apply direct pressure to the site using clean paper towels or gauze. If the wound will not stop bleeding after 15 minutes of direct pressure, go to nearest healthcare facility. If it is after hours, follow the directions listed above. All bites must be reported to your immediate supervisor. Medical information related to your injury will not be discussed or revealed to supervisors, HR representatives or other health care professionals who do not need the information.

**Medical Emergency:**

**CALL 911** if the condition is **LIFE THREATENING or REQUIRES IMMEDIATE MEDICAL ATTENTION BEYOND FIRST AID.**

**If poisoning is suspected:** Contact the Poison Control Center at 1-800-222-1222.

**Employees, Students, Work-Study Students and Volunteers with Work-Related Injuries:**

**Employees or their supervisors must contact HR during regular working hours to obtain medical authorization within 24 hours of any injury. ALL WORK RELATED INJURIES MUST BE REPORTED to HR via WesternU’s Incident Report system. If the employee will be going to US Healthworks for medical treatment, they must obtain authorization from HR to take with them for medical treatment at US Healthworks Medical Group, 801 Corporate Center Dr., Suite 130, in Pomona, CA.**

Students with private health insurance will be charged for services rendered at any healthcare provider location. Any bills not paid by their own health insurance carrier can be presented to University Risk Manager for review/processing for payment. However, the student must have completed all the required forms found at http://www.westernu.edu/risk-management/risk-management-forms/ .

**Recordkeeping:** The PI/Non-Laboratory Supervisor must maintain all training records as discussed above for at least three years and provide recordkeeping and documentation that they advised staff of the offer of the Hepatitis B vaccination and other recommended vaccinations. The healthcare provider maintains all medical records related to the provision of clinical services for thirty years past the last date of employment with WesternU.

**Plan Review for Facility Design and Inspections:**

The Biosafety Officer will be kept informed of any renovations of a facility where ATPs-L are used to ensure construction and renovation are in accordance with the latest edition of *Biosafety in Microbiological and Biomedical Laboratories* (BMBL),as required by state law.

The PI/Non-Laboratory Supervisor is responsible for notifying the WesternU Biosafety Committee of any planned research involving materials that may contain BBP/OPIMs or airborne pathogens prior to the start of research. Laboratory inspections will be conducted at least yearly for laboratories working with blood, OPIM and ATPs-L. Laboratory inspection forms will be kept on file with the Laboratory Directors with copies available in EH&S.

**Communication of Hazards to WesternU Employees [required by 8CCR§5193(g)]**

**Check all the boxes that apply to the Safety/ECP training that your employees have received:**

During the past 12 months, all new employees with occupational exposure to BBP/OPIMs or ATPs-L in this work area have received training on the Standard Precautions and the campus ECP. The training has been documented and is on file in the employee’s department.

During the past 12 months, all new employees have received on-the-job training for safe work practices and the types of biohazards in their work environment. The training has been documented and is on file in employee’s department for a minimum of 3 years.

All employees with longer employment service have received an annual training update on the Standard Precautions and the campus ECP. The training has been documented and is on file in the employee’s department.

**Check all the boxes that apply to the use of warning labels and signs in your work area.**

The biohazard symbol and orange-red warning labels that display the word “Biohazard” are used to identify containers of regulated waste, refrigerators/freezers containing blood, OPIM and other containers used to store, transport, or ship blood/OPIM or other biohazard material.

Contaminated equipment is labeled with the biohazard warning label. The label documents the portions of the equipment that remain contaminated.

**Verification Statement**:

I have read and understand the requirements of the BBP/OPIM, and the ATD Program as well as my responsibility in complying with the ECP. The information that I have provided in this form is accurate and verifiable during audits of this work area.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of Principal Investigator or Non-Laboratory Supervisor Date

##### **APPENDIX 1. Personnel Signatures**

I have reviewed the Exposure Control Plan and agree to comply with the plan.

|  |  |  |
| --- | --- | --- |
| **Print Name (last, first)** | **Signature** | **Date Plan Reviewed** |
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##### **APPENDIX 2. Vaccination Declination Statement**

The employer shall ensure that employees who decline to accept a recommended vaccination offered by the employer sign and date the following statement as required by California Code of Regulations, Title 8, Subchapter 7; Group 15. Article 109; section 5193, Subsection (f)(2)(D):

I understand that due to my occupational exposure to blood or other potentially infectious material (OPIM) I may be at risk of acquiring infection with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(name of disease or pathogen). I have been given the opportunity to be vaccinated against this disease or pathogen at no charge to me. However, I decline this vaccination at this time. I understand that, by declining this vaccine, I continue to be at risk of acquiring \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious material (OPIM) and I want to be vaccinated, I can receive the vaccination at no charge to me. \_\_\_\_ (initials)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Print Name Signature

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date of Birth Employee ID number

##### **APPENDIX 3. Aerosol Transmissible Pathogens – Laboratory**

This appendix contains a list of agents that, when reasonably anticipated to be present, require a laboratory to comply with Section 5199 for laboratory operations by performing a risk assessment and establishing a biosafety plan/exposure control plan that includes appropriate control measures as identified in the standard.

**Adenovirus** (in clinical specimens and in cultures or other materials derived from clinical specimens)

**Arboviruses**, unless identified individually elsewhere in this list (large quantities or high concentrations\* of arboviruses for which CDC recommends BSL-2, e.g., dengue virus; potentially infectious clinical materials, infected tissue cultures, animals, or arthropods involving arboviruses for which CDC recommends BSL-3 or higher, e.g., Japanese encephalitis, West Nile virus, Yellow Fever)

**Arenaviruses** (large quantities or high concentrations of arenaviruses for which CDC recommends BSL-2, e.g., Pichinde virus; potentially infectious clinical materials, infected tissue cultures, animals, or arthropods involving arenaviruses for which CDC recommends BSL-3 or higher, e.g., Flexal virus)

***Bacillus anthracis*** (activities with high potential for aerosol production\*\*, large quantities or high concentrations, screening environmental samples from *b. anthracis* -contaminated locations)

***Blastomyces dermatitidis*** (sporulating mold-form cultures, processing environmental materials known or likely to contain infectious conidia)

***Bordetella pertussis*** (aerosol generation, or large quantities or high concentrations)

***Brucella abortus, B. canis, B. “maris", B. melitensis, B. suis*** (cultures, experimental animal studies, products of conception containing or believed to contain pathogenic *Brucella* spp.)

***Burkholderia mallei, B. pseudomallei*** (potential for aerosol or droplet exposure, handling infected animals, large quantities or high concentrations)

**Cercopithecine herpesvirus** (see Herpesvirus simiae)

***Chlamydia pneumoniae*** (activities with high potential for droplet or aerosol production, large quantities or high concentrations)

***Chlamydia psittaci*** (activities with high potential for droplet or aerosol production, large quantities or high concentrations, non-avian strains, infected caged birds, necropsy of infected birds and diagnostic examination of tissues or cultures known to contain or be potentially infected with *C. psittaci* strains of avian origin)

***Chlamydia trachomatis*** (activities with high potential for droplet or aerosol production, large quantities or high concentrations, cultures of lymphogranuloma venereum (LGV) serovars, specimens known or likely to contain *C. trachomatis*)

***Clostridium botulinum*** (activities with high potential for aerosol or droplet production, large quantities or high concentrations)

***Coccidioides immitis, C. posadasii*** (sporulating cultures, processing environmental materials known or likely to contain infectious arthroconidia, experimental animal studies involving exposure by the intranasal or pulmonary route)

***Corynebacterium diphtheriae***

***Coxiella burnetti*** (inoculation, incubation, and harvesting of embryonated eggs or cell cultures; experimental animal studies, animal studies with infected arthropods, necropsy of infected animals, handling infected tissues)

**Crimean-Congo haemorrhagic fever virus**

**Cytomegalovirus, human** (viral production, purification, or concentration)

**Eastern equine encephalomyelitis virus (EEEV)** (clinical materials, infectious cultures, infected animals or arthropods)

**Ebola virus**

**Epstein-Barr virus** (viral production, purification, or concentration)

***Escherichia coli,* shiga toxin-producing only** (aerosol generation or high splash potential)

**Flexal virus**

***Francisella tularensis*** (suspect cultures––including preparatory work for automated identification systems, experimental animal studies, necropsy of infected animals, high concentrations of reduced-virulence strains)

**Guanarito virus**

***Haemophilus influenzae*, type b**

**Hantaviruses** (serum or tissue from potentially infected rodents, potentially infected tissues, large quantities or high concentrations, cell cultures, experimental rodent studies)

***Helicobacter pylori*** (homogenizing or vortexing gastric specimens)

**Hemorrhagic fever** -- specimens from cases thought to be due to dengue or yellow fever viruses or which originate from areas in which communicable hemorrhagic fever are reasonably anticipated to be present

**Hendra virus**

**Hepatitis B, C, and D viruses** (activities with high potential for droplet or aerosol generation, large quantities or high concentrations of infectious materials)

**Herpes simplex virus 1 and 2**

**Herpesvirus simiae (B-virus)** (consider for any material suspected to contain virus, mandatory for any material known to contain virus, propagation for diagnosis, cultures)

***Histoplasma capsulatum*** (sporulating mold-form cultures, propagating environmental materials known or likely to contain infectious conidia)

**Human herpesviruses 6A, 6B, 7, and 8** (viral production, purification, or concentration)

**Influenza virus, non-contemporary human (H2N2) strains, 1918 influenza strain, highly pathogenic avian influenza (HPAI)** (large animals infected with 1918 strain and animals infected with HPAI strains in ABSL-3 facilities, loose-housed animals infected with HPAI strains in BSL-3-Ag facilities)

**Influenza virus, H5N1 - human, avian**

**Junin virus**

**Kyasanur forest disease virus**

**Lassa fever virus**

***Legionella pneumophila*, other legionella-like agents** (aerosol generation, large quantities or high concentrations)

**Lymphocytic choriomeningitis virus (LCMV)** (field isolates and clinical materials from human cases, activities with high potential for aerosol generation, large quantities or high concentrations, strains lethal to nonhuman primates, infected transplantable tumors, infected hamsters)

**Machupo virus**

**Marburg virus**

**Measles virus**

**Monkeypox virus** (experimentally or naturally infected animals)

**Mumps virus**

***Mycobacterium tuberculosis complex (M. africanum, M. bovis, M. caprae, M. microti, M. pinnipedii, M. tuberculosis*** (aerosol-generating activities with clinical specimens, cultures, experimental animal studies with infected nonhuman primates)

***Mycobacteria* spp. other than those in the *M. tuberculosis* complex and *M. leprae***(aerosol generation)

***Mycoplasma pneumoniae***

***Neisseria gonorrhoeae*** (large quantities or high concentrations, consider for aerosol or droplet generation)

***Neisseria meningitidis*** (activities with high potential for droplet or aerosol production, large quantities or high concentrations)

**Nipah virus**

**Omsk hemorrhagic fever virus**

**Parvovirus B19**

**Prions** (bovine spongiform encephalopathy prions, only when supported by a risk assessment)

**Rabies virus, and related lyssaviruses** (activities with high potential for droplet or aerosol production, large quantities or high concentrations)

**Retroviruses, including Human and Simian Immunodeficiency viruses (HIV and SIV)** (activities with high potential for aerosol or droplet production, large quantities or high concentrations)

***Rickettsia prowazekii, Orientia (Rickettsia) tsutsuagmushi*, *R. typhi (R. mooseri),* Spotted Fever Group agents (*R. akari, R. australis, R. conorii, R. japonicum, R. rickettsii,* and *R. siberica*)** (known or potentially infectious materials; inoculation, incubation, and harvesting of embryonated eggs or cell cultures; experimental animal studies with infected arthropods)

**Rift valley fever virus (RVFV)**

**Rubella virus**

**Sabia virus**

***Salmonella* spp. other than *S. typhi*** (aerosol generation or high splash potential)

***Salmonella typhi*** (activities with significant potential for aerosol generation, large quantities)

**SARS coronavirus** (untreated specimens, cell cultures, experimental animal studies)

***Shigella* spp.** (aerosol generation or high splash potential)

***Streptococcus* spp., group A**

**Tick-borne encephalitis viruses (Central European tick-borne encephalitis, Far Eastern tick-borne encephalitis, Russian spring and summer encephalitis)**

**Vaccinia virus**

**Varicella zoster virus**

**Variola major virus (Smallpox virus)**

**Variola minor virus (Alastrim)**

**Venezuelan equine encephalitis virus (VEEV)** (clinical materials, infectious cultures, infected animals or arthropods)

**West Nile virus (WNV)** (dissection of field-collected dead birds, cultures, experimental animal and vector studies)

**Western equine encephalitis virus (WEEV)** (clinical materials, infectious cultures, infected animals or arthropods)

***Yersinia pestis*** (antibiotic resistant strains, activities with high potential for droplet or aerosol production, large quantities or high concentrations, infected arthropods, potentially infected animals)

\* ‘Large quantities or high concentrations’ refers to volumes or concentrations considerably in excess of those typically used for identification and typing activities.  A risk assessment must be performed to determine if the quantity or concentration to be used carries an increased risk, and would therefore require aerosol control.

\*\* ‘activities with high potential for aerosol generation’ include centrifugation

Appendix 4 – Aerosol Transmissible Diseases/Pathogens (Mandatory)

This appendix contains a list of diseases and pathogens which are to be considered aerosol transmissible pathogens or diseases for the purpose of Section 5199. Employers are required to provide the protections required by Section 5199 according to whether the disease or pathogen requires airborne infection isolation or droplet precautions as indicated by the two lists below.

**Diseases/Pathogens Requiring Airborne Infection Isolation**

Aerosolizable spore-containing powder or other substance that is capable of causing serious human disease, e.g. Anthrax/Bacillus anthracis

Avian influenza/Avian influenza A viruses (strains capable of causing serious disease in humans)

Varicella disease (chickenpox, shingles)/Varicella zoster and Herpes zoster viruses, disseminated disease in any patient. Localized disease in immunocompromised patient until disseminated infection ruled out

Measles (rubeola)/Measles virus

Monkeypox/Monkeypox virus

Novel or unknown pathogens

Severe acute respiratory syndrome (SARS)

Smallpox (variola)/Varioloa virus

Tuberculosis (TB)/Mycobacterium tuberculosis -- Extrapulmonary, draining lesion; Pulmonary or laryngeal disease, confirmed; Pulmonary or laryngeal disease, suspected

Any other disease for which public health guidelines recommend airborne infection isolation

**Diseases/Pathogens Requiring Droplet Precautions**

Diphtheria pharyngeal

Epiglottitis, due to Haemophilus influenzae type b

Haemophilus influenzae Serotype b (Hib) disease/Haemophilus influenzae serotype b -- Infants and children

Influenza, human (typical seasonal variations)/influenza viruses

Meningitis

Haemophilus influenzae, type b known or suspected

Neisseria meningitidis (meningococcal) known or suspected

Meningococcal disease sepsis, pneumonia (see also meningitis)

Mumps (infectious parotitis)/Mumps virus

Mycoplasmal pneumonia

Parvovirus B19 infection (erythema infectiosum)

Pertussis (whooping cough)

Pharyngitis in infants and young children/Adenovirus, Orthomyxoviridae, Epstein-Barr virus, Herpes simplex virus,

Pneumonia

Adenovirus

Haemophilus influenzae Serotype b, infants and children

Meningococcal

Mycoplasma, primary atypical

Streptococcus Group A

Pneumonic plague/Yersinia pestis

Rubella virus infection (German measles)/Rubella virus

Severe acute respiratory syndrome (SARS)

Streptococcal disease (group A streptococcus)

Skin, wound or burn, Major

Pharyngitis in infants and young children

Pneumonia

Scarlet fever in infants and young children

Serious invasive disease

Viral hemorrhagic fevers due to Lassa, Ebola, Marburg, Crimean-Congo fever viruses (airborne infection isolation and respirator use may be required for aerosol-generating procedures)

Any other disease for which public health guidelines recommend droplet precautions