1. **Purpose**: This document is intended to serve principal investigators (PIs) and other employers as a model for developing an Exposure Control Plan (ECP) as required under the OSHA Bloodborne Pathogens Standard. Bloodborne Pathogens (BBPs) include pathogenic microorganisms that are present in human blood and can cause disease in humans, including (but not limited to) hepatitis B virus (HBV) and human immunodeficiency virus (HIV). The primary purpose of an ECP is to limit potential for staff exposure to BBPs. This model provides an abbreviated format which is to be utilized in conjunction with the PI’s Biological Hazard Registration (BioRaft Safety Management System) and Laboratory Biosafety Manual for development of a complete ECP. Chief ECP elements in regard to staff training, work methods, personal protective equipment, and engineering controls must be addressed under the PI’s BioRaft Biohazard Registration and Laboratory Biosafety Manual. The ECP model is not to be considered a substitute for the OSHA standard. It provides general guidance on a particular standard-related topic but should not be considered a definitive interpretation for compliance with OSHA requirements. The reader should consult the OSHA 1910.1030: Bloodborne Pathogens Standard in its entirety for specific compliance requirements.

2. **Scope / Applicability**: Virginia Commonwealth University is committed to providing a safe and healthful work environment for all staff. In pursuit of this endeavor, employees with potential for exposure to BBPs are required to be protected under an ECP which includes all elements required under the OSHA BBP Standard.

3. **Procedure**:

   a. **Program Administration**:

      1) Principal Investigators are responsible for maintaining, reviewing, and updating the ECP at least annually, and whenever necessary to include new or modified tasks and procedures.

      2) Employees determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply
3) The PI will ensure that staff are provided with all necessary PPE, engineering controls (e.g., sharps containers), labels, and red bags as required by the standard.

4) The PI will be responsible for ensuring that all medical actions required are performed and that appropriate employee health and OSHA records are maintained.

5) The PI will be responsible for training, documentation of training, and making the written ECP available to employees, OSHA, and NIOSH representatives.

b. Employee Exposure Determination: The PI is responsible for completing the following lists for staff/students: This list below should include all job classifications within the laboratory/workspace in which all employees have potential for occupational BBP exposure:

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The list below should include all job classifications in which some employees have occupational exposure. Included is a list of tasks and procedures, or groups of closely related tasks and procedures, in which occupational exposure may occur for these individuals:

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<th>JOB TITLE</th>
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c. Methods of Implementation and Control:

1) Universal Precautions: All employees will utilize universal precautions as minimum precaution level for all applications with potential for exposure to bloodborne pathogens.

2) Exposure Control Plan: Employees covered by the bloodborne pathogens standard receive an explanation of this ECP during their initial training session. It will also be reviewed in their annual refresher training. All employees have an opportunity to review this plan at any time during their work shifts. If requested, employees will be provided with a copy of the ECP free of charge within 15 days of the request. The PI is responsible for reviewing and updating the ECP annually or more frequently if necessary to reflect any new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

3) Engineering Controls and Work Practices: Engineering controls and work practice controls will be used to prevent or minimize exposure to bloodborne pathogens. Specific engineering controls (Biological Safety Cabinets, sharps containers, etc) and work practice controls to be used when working with BBPs are identified on the PI’s Biohazard Registration.

4) PIs will identify the need for changes in engineering control and work practices through conducting employee interviews, oversight of laboratory operations, and review of OSHA records. If engineered safety devices are available which can practically/safely be added to the protocol PIs must ensure that the substitution is made. If substitution with safety engineered devices is not practical PIs must provide justification (to be maintained with this ECP). All front line workers and management officials are involved in the evaluation process during annual review of the ECP.

5) Personal Protective Equipment (PPE): PPE is provided to our employees at no cost to them. Specific details regarding PPE usage and training are provided on the PI’s Biohazard Registration.

d. Housekeeping:
1) Regulated waste is placed in containers which are closable, constructed to contain all contents and prevent leakage, appropriately labeled or color-coded (see Labels), and closed prior to removal to prevent spillage or protrusion of contents during handling. Specific housekeeping procedures are identified on the PI’s Biological Hazard Registration.

2) Contaminated sharps are discarded immediately or as soon as possible in containers that are closable, puncture-resistant, leak proof on sides and bottoms, and labeled or color coded appropriately. Specific details for sharps disposal and responding to spills involving sharps materials are included on the PI’s Biological Hazard Registration.

3) Laundry: Gross contaminated items should be disposed of via red bagging. PI’s laundering potentially contaminated articles through contract service providers must ensure that soiled articles are securely sealed within red bags prior to relinquishing to contractor. If the PI plans to launder potentially contaminate articles in house, the Biosafety Office should be contacted for guidance.

e. Hepatitis B Vaccination: The PI will provide training to employees on hepatitis B vaccinations, addressing the safety, benefits, efficacy, methods of administration, and availability. The hepatitis B vaccination series is available at no cost after training and within 10 days of initial assignment to employees identified in the exposure determination section of this plan. Vaccinations may be arranged through VCU Employee Health Services. HBV Vaccination is encouraged unless: employee has previously received the series, antibody testing reveals that the employee is immune, or medical evaluation indicates that vaccination is contraindicated. Employees choosing to decline vaccination employee must sign a declination form (attached as appendix). Employees who decline may request and obtain the vaccination at a later date at no cost. Documentation of refusal of the vaccination is maintained in the PI’s central files.

f. Post-Exposure Evaluation and Follow-Up: Exposure incidents must be reported immediately to VCU Employee Health Services, which will provide confidential medical evaluation and follow-up. PIs are responsible for ensuring the following: documentation of route(s)/cause of exposure, ID of source individual (if possible) and obtaining consent for testing determine BBP status*, and conveying of source individual's test results to employee's health care provider. The
PI must also assure that exposed employee is provided with test results and information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual.

After obtaining consent, PI’s are responsible for ensuring collection of exposed employee's blood as soon as feasible following exposure incident, and for arranging testing to determine HBV and HIV serological status. If an employee does not give consent for HIV serological testing during collection of blood for baseline testing, preserve baseline blood sample for at least 90 days; if exposed employee elects to have baseline sample tested during waiting period, perform testing as soon as feasible

*If source individual is already known to be HIV, HCV and/or HBV positive, new testing need not be performed.

g. **Administration of Post-Exposure Evaluation and Follow-Up:** The PI must ensure that health care professional(s) responsible for employee's hepatitis B vaccination and post-exposure evaluation and follow-up are provided with a copy of OSHA's bloodborne pathogens standard and are also provided with a description of the employee's job duties relevant to the exposure incident, the related route(s) of exposure, circumstances leading to the exposure, results of the source individual's blood test (if available), and relevant employee medical records, including vaccination status. The PI must provide the employee with a copy of the evaluating health care professional's written opinion within 15 days after completion of the evaluation.

h. **Procedures for Evaluating Circumstances Surrounding Exposure Incident:** The PI will review the circumstances of all exposure incidents to determine cause of the incident and identify needed corrective measure in relation to engineering controls, work practices followed, devices utilized, PPE, and employee training regimen.

i. **Employee Training:** All employees who have occupational exposure to bloodborne pathogens receive training covering the epidemiology, symptoms, and transmission of bloodborne pathogen diseases. Task-specific training and a full review of this ECP is to be provided by the PI for all new staff and prior to existing staff conducting new procedures with potential for BBP exposure. Confirmation of adequate training is provided under the PI’s Biological Hazard Registration.
j. Recordkeeping:

1) Training Records: Training records are completed for each employee upon completion of training. These documents will be kept for at least three years in the PI’s central files. The records must include: dates of training sessions, contents or summary of training sessions, names and qualifications of persons conducting training, names and job titles of all persons attending training sessions. Bloodborne Pathogen refresher training is required annually.

2) Medical Records: Medical records are maintained for each employee with occupational exposure in accordance with 29 CFR 1910.1020, "Access to Employee Exposure and Medical Records." The PI is responsible for maintaining the required medical records for the duration of employment plus 30 years. Employee medical records are provided upon employee request or to anyone having written consent of the employee within 15 working days.

3) OSHA Recordkeeping: The PI must document all exposure incidents involving BBPs per requirements of OSHA BBP Standard

4) Sharps Injury Log: All percutaneous injuries from contaminated sharps are recorded in a Sharps Injury Log to include: date of the injury, type/brand of device involved, department or work area where incident occurred, and an explanation of how incident occurred. The log is reviewed at least annually as part of the annual evaluation of the ECP and is maintained for at least five years following the end of the calendar year covered. If a copy is requested by anyone, any personal identifiers must be removed from the report.

Principal Investigator Certification: I attest that the conditions of this ECP will maintained for all staff with potential for occupational exposure to BBPs:

Principal Investigator: Name, Signature and Date
HEPATITIS B VACCINE DECLINATION (MANDATORY)

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

Signed: _____________________________
(Employee Name)

Date: ______________________________