**Biohazardous Agent Reference Document (BARD) and**

**Information for Healthcare Providers in the Event of an Exposure**

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| The BARD is an additional guidance tool. It is not a substitute for a risk assessment, biosafety training, lab-specific training, SOP as required by the IBC or a formal [IBC master protocol registration](https://www.uvm.edu/rpo/biosafety-oversight). This document must be readily available in the laboratory, and it is the responsibility of the Laboratory Supervisor or Principal Investigator to ensure that all personnel have read and understood the information. The BARD is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Please bring this IBC-approved BARD with you to the UVMMC Emergency Department if there has been an exposure and someone requires medical assistance.  INSTRUCTIONS for BARD Preparation   1. Complete the blue Information for Healthcare Providers section. 2. Review the standard information contained in the green section of this document. 3. Add/revise information that is specific to your work in the laboratory (such as strain-specific information). Please be sure that the track changes function is turned on to indicate any changes that you make. 4. Submit the BARD along with your IBC master protocol registration or amendment. 5. Once approved by the IBC, all personnel must review this BARD. The PI will attest during the submission of the registration or amendment to add new personnel that each lab member has read and understands the material. | |
| **Information for Healthcare Providers**  Dear Healthcare Provider,  This individual works in a UVM research laboratory and has been exposed to a pathogen or toxin. Information about the materials this person may have been exposed to is listed below. You may also find useful additional information in subsequent pages of this reference document. | |
| **Pathogen Name:** | Human Immunodeficiency Virus (HIV-1) |
| **Pathogen/Toxin Classification:** |  |
| **List All Strains Used in the Laboratory:** |  |
| **List Resistant Genes Known to be Encoded:** |  |
| **Modes of Transmission *(mucous membranes, needle stick, inhalation)*:** | Blood-borne, mucous membrane contact, sexual contact |
| **Known Medical Precautions and Treatment** | |

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| **Prophylaxis** | Post-exposure prophylaxis cocktail may prevent infection if started within 72 hours |
| **Vaccines** | None available |
| **Treatment and/or Post-exposure Intervention** | No cure. Antiretroviral therapy is used to manage the chronic disease |
| **Surveillance** | Monitor for symptoms and test using serology and viral isolation |
| **Additional Medical Precautions (immunosuppression, pregnancy, allergies)** | Women who are pregnant or planning on becoming pregnant should be aware that pregnant women infected with HIV can transmit the virus to their fetus during pregnancy, delivery, or breastfeeding.  Follow UVM’s Exposure Control Plan for Bloodborne Pathogens: [http://www.uvm.edu/safety/lab/bloodborne-pathogens-and-exposure-control-plan - ECP](http://www.uvm.edu/safety/lab/bloodborne-pathogens-and-exposure-control-plan#ECP) |

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| **Health Hazards** | |
| **Host Range** | Humans |
| **Signs and Symptoms** | Early flu-like symptoms such as muscle or joint pain, diarrhea, nausea, vomiting, headache, enlarged lymph nodes, liver or spleen organomegaly, weight loss, neurological symptoms. |
| **Infectious Dose** | Unknown |
| **Incubation Period** | Antibodies generally detectable in 1 – 3 months post-infection |
| **Exposure Procedures** | |
| **Mucous membranes** | Flush eyes, mouth or nose for 15 minutes at eyewash station. |
| **Other exposures** | Wash area with soap and water for 15 minutes |
| **Medical Follow-Up** | Contact UVMMC Infectious Disease Dept. directly at **(802) 847-2700** for immediate assistance. Bring this document with you if seeking medical care. |
| **Reporting** | Report all exposures or near misses to:   1. Your immediate Supervisor 2. SOS at 802-656-2560 and ask to have the EH&S team paged 3. Risk Management: <https://www.uvm.edu/riskmanagement/incident-claim-reporting-procedures> |
| **Laboratory Hazards** | |
| **Laboratory Acquired Infections** | Numbers of lab-acquired infections are low, 57 cases documented of occupationally acquired infections as of 2001. |
| **Sources** | Blood, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, peritoneal fluid, pleural fluid, pericardial fluid, amniotic fluid, other specimens containing blood, breast milk, unscreened or inadequately treated blood products, infected cells and tissues, laboratory cultures. |
| **Characteristics** | |
| **Morphology** | Member of the Retrovirus family, enveloped virus. |
| **Strain Specific Characteristics** | Virus tropism may be altered by pseudotyping |
| **Containment Requirements** | |
| **BSL - 2** | Manipulation of known or potentially infected clinical samples and cell cultures of laboratory adapted strains (RG3) |
| **BSL - 3** | Manipulations involving high aerosol potential, high concentrations or volumes of virus (RG3). |
| **ABSL - 2** | Work with animals infected with attenuated or laboratory adapted strains |
| **ABSL - 3** | Work with infected non-human primates |
| **Aerosol generating activities** | Centrifugation, homogenizing, vortexing or stirring, changing of animal cages, cell sorting, pipetting, pouring liquids, sonicating, loading syringes |
| **Primary containment device (BSC)** | Use for all activities with live virus, unloading centrifuge rotors, and aerosol-generating activities |
| **Personal Protective Equipment (PPE)** | |
| ***Minimum PPE Requirements*** | Nitrile gloves, closed toed shoes, lab coat, appropriate eye/face protection. Disposable sleeves for biosafety cabinet work. |
| ***Additional Precautions***  ***(Risk assessment dependent)*** | A medical surveillance program should be implemented. Sharps use should be strictly limited. Non-intact skin should be allowed to scab over before entering the lab, and should then be covered with waterproof dressings. Remove hand jewelry before donning gloves, change gloves every 30 minutes. |
| **Viability** | |
| **Disinfection** | Susceptible to fresh 2% glutaraldehyde, 1% sodium hypochlorite, iodine, phenolics; with 10 minute contact time |
| **Inactivation** | Inactivated by heat >60°C, and pH extremes |
| **Survival Outside Host** | Capable of surviving in blood in syringes at room temperature for 42 days, in blood and cerebrospinal fluid from autopsies for 11 days, and dehydrated on surfaces for longer than 7 days depending on the initial titer |
| **Spill Clean-Up Procedures** | |
| **Small Spill** | Notify others working in the lab. Allow aerosols to settle. Don appropriate PPE. Cover area of the spill with paper towels and apply approved disinfectant, working from the perimeter towards the center. Allow 30 minutes of contact time before clean up and disposal. Dispose in double biowaste bags and biobox. |
| **Large Spill** | **Inside of a lab:** Call UVM Service Operations at 656-2560 and ask to speak to a dispatcher. Ask them to page Risk Management and Safety.  **Outside of the lab:** Pull the nearest fire alarm and evacuate the building. Wait out front of the building for emergency responders to arrive. |
| **References** | |
| **Canadian PSDS** | <https://www.canada.ca/en/public-health/services/laboratory-biosafety-biosecurity/pathogen-safety-data-sheets-risk-assessment/human-immunodeficiency-virus.html> |
| **BMBL** | <https://www.cdc.gov/biosafety/publications/bmbl5/> |
| **CDC Guidelines** | <https://www.cdc.gov/actagainstaids/basics/index.html> |
| **Current Protocols in Microbiology** | <http://onlinelibrary.wiley.com/doi/10.1002/9780471729259.mc15j01s28/abstract> |