**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:** | Lentivirus & Lentiviral Vectors |
| **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)*:** | Mucous membrane contact, ingestion, needlestick or other injury, contact with non-intact skin |
| **Known Medical Precautions and Treatment** | |

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| **Prophylaxis** | None available |
| **Vaccines** | None available |
| **Treatment and/or Post-exposure Intervention** | Anti-retroviral post-exposure prophylaxis (PEP) as indicated by physician |
| **Surveillance** | Monitor for symptoms and test using serology or western blot |
| **Additional Medical Precautions (immunosuppression, pregnancy, allergies)** |  |

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| **Health Hazards** | |
| **Host Range** | Humans and non-human primates. Replacing the envelope with VSV creates a broader host range |
| **Signs and Symptoms** | Fever, fatigue, weight loss, immunological and neurological disease, insertional mutagenesis |
| **Infectious Dose** | Unknown |
| **Incubation Period** | 1 – 6 months |
| **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** | 6 reported lab-acquired infections |
| **Sources** | Blood, tissues, cerebrospinal fluid, nasopharynx secretions, and cells from infected humans, animals and infected cell lines. |
| **Characteristics** | |
| **Morphology** | Member of the retrovirus family, enveloped virus, commonly used to deliver genetic information into DNA of host cells, most are derived from HIV-1 |
| **Strain Specific Characteristics** | Several generations of lentiviral vectors exist with multiple safety features such as segregation of vector and packaging functions on separate plasmids, or deletions of genes essential to replication |
| **Containment Requirements** | |
| **BSL - 2** | Manipulation of known or potentially infected clinical samples and cell cultures of laboratory adapted strains (RG2) |
| **BSL - 3** |  |
| **ABSL - 2** | Work with animals infected with risk group 2 strains. Animals infected with replication incompetent strains may be moved to ABSL-1 after 72 hours. If the strain is replication competent, animals must remain at ABSL-2 |
| **ABSL - 3** |  |
| **Aerosol generating activities** | Centrifugation, homogenizing, vortexing or stirring, changing of animal cages, animal surgeries, cell sorting, pipetting, pouring liquids, sonicating, loading syringes |
| **Primary containment device (BSC)** | Use for all work with infectious or potentially infectious material, loading and unloading centrifuge rotors. |
| **Personal Protective Equipment (PPE)** | |
| ***Minimum PPE Requirements*** | Nitrile gloves, closed toed shoes, lab coat, appropriate eye/face protection |
| ***Additional Precautions***  ***(Risk assessment dependent)*** | Sharps use strictly limited. Open wounds or cuts should be allowed to scab over before entering the laboratory, and should then be covered with waterproof dressings. |
| **Viability** | |
| **Disinfection** | Susceptible to fresh 10% bleach, 2% glutaraldehyde, formaldehyde; with 10 minute contact time |
| **Inactivation** | Inactivated by heat above 56°C for at least 30 minutes |
| **Survival Outside Host** | Drying causes 90 – 99% reduction in viability after several hours |
| **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** | |
| **NIH Office of Science Policy (RAC guidelines)** | <https://osp.od.nih.gov/wp-content/uploads/2013/12/Lenti_Containment_Guidance.pdf> |
| **BMBL** | <https://www.cdc.gov/biosafety/publications/bmbl5/> |
| **Journal of Occupational & Environmental Medicine** | <http://journals.lww.com/joem/pages/results.aspx?txtkeywords=lentivirus> |
| **UVM Lentivirus Fact Sheet** | <http://www.uvm.edu/safety/sites/default/files/lentiviral_vectors_fact_sheet.pdf> |