**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:** | Listeria monocytogenes |
| **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)*:** | Ingestion, transplacental, mucous membrane contact, 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** | Ampicillin or amoxicillin together with the addition of gentamicin for immunocompromised individuals |
| **Surveillance** | Monitor for symptoms and test by laboratory cultivation |
| **Additional Medical Precautions (immunosuppression, pregnancy, allergies)** | Women who are pregnant or planning on becoming pregnant should be aware that listeriosis during pregnancy can lead to loss of pregnancy, or severe illness or death of neonates. Immunocompromised individuals are also at an increased risk. |

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| **Health Hazards** | |
| **Host Range** | Humans, other mammals, fish, crustaceans, insects |
| **Signs and Symptoms** | Fever is most common, but several manifestations may also include: chills, malaise, back pain, joint pain, stiffness of neck, tremors, seizures, diarrhea, vomiting, swelling of salivary glands and lymph nodes, papules or pustules on hands and arms, muscle pain, headache |
| **Infectious Dose** | 10 – 100 CFU (colony forming units) in healthy host |
| **Incubation Period** | Highly variable. Febrile gastroenteritis may appear within 18 – 20 hours, other manifestations may appear within 1 – 4 weeks. |
| **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** | Some suspected cases, none of which have been confirmed |
| **Sources** | Blood, cerebrospinal fluid, feces, skin lesions, infected organs, tissues, and body fluids from human or animal specimens, contaminated foods, or laboratory cultures |
| **Characteristics** | |
| **Morphology** | Gram-positive, non-spore forming, rod-shaped coccobacillus that has the ability to grow at a wide range of temperatures and pH values |
| **Strain Specific Characteristics** | Most human and animal cases caused by serovars 4b, 1/2b, and 1/2a |
| **Containment Requirements** | |
| **BSL - 2** | Manipulation of known or potentially infected clinical samples and cultures of laboratory adapted strains (RG2) |
| **BSL - 3** |  |
| **ABSL - 2** | Work with animals infected with risk group 2 strains |
| **ABSL - 3** |  |
| **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 aerosol-generating activities, large volumes, or high concentrations |
| **Personal Protective Equipment (PPE)** | |
| ***Minimum PPE Requirements*** | Nitrile gloves, lab coat, appropriate eye/face protection. Wash hands after removing gloves. |
| ***Additional Precautions***  ***(Risk assessment dependent)*** | Sharps use strictly limited. |
| **Viability** | |
| **Disinfection** | At room temperature: susceptible to 10% bleach, iodophor compounds, 70% alcohols; with 15-minute contact time. Five to ten-fold higher concentrations of disinfectants are required at 4°C. |
| **Inactivation** | Inactivated by temperatures above 70°C, pressure above 500 MPa |
| **Survival Outside Host** | Commonly found in soil, can tolerate cold temperatures, low pH, and is relatively heat resistant. |
| **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/listeria-monocytogenes.html> |
| **BMBL** | <https://www.cdc.gov/biosafety/publications/bmbl5/> |
| **CDC Guidelines** | <https://www.cdc.gov/listeria/technical.html> |