

BIOHAZARDOUS AGENT REFERENCE DOCUMENT**Stenotrophomonas maltophilia**

The Biohazardous Agent Reference Document (BARD) is a general guidance resource that reviews and summarizes the nature of a pathogen or biotoxin, and offers safety requirements for work with the agent in the laboratory. The BARD may replace the formal SOPs used in conjunction with some IBC registrations.

The BARD is provided as an additional guidance tool, and is not a substitute for a risk assessment, biosafety training, lab-specific training, or a formal [IBC master protocol registration](#). This document should 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, understood, and signed the document. The BARD is for informational purposes only, and is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Please consult a health care provider for any medical questions or concerns.

INSTRUCTIONS

- 1. Review the information contained in this document.**
- 2. Add any necessary 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.**
- 3. Instruct all personnel to review the BARD and sign the last page, indicating that they have read and understood the information.**
- 4. Submit the BARD along with your IBC master protocol registration, amendment, or continuing review.**

BIOHAZARDOUS AGENT REFERENCE DOCUMENT

Stenotrophomonas maltophilia

CHARACTERISTICS

Morphology	Gram-negative, aerobic, non-fermentative, motile, rod-shaped bacteria. Emerging opportunistic pathogen. Previously known as <i>Pseudomonas maltophilia</i> and <i>Xanthomonas maltophilia</i>
Strain Specific Characteristics	Many strains exhibit multiple-drug-resistance.

HEALTH HAZARDS

Host Range	Humans
Modes of Transmission	Inhalation of aerosols, ingestion, contact with non-intact skin or mucous membranes
Signs and Symptoms	Productive cough, fever, respiratory tract infection, pneumonia, bacteremia, biliary sepsis, endocarditis, eye infection, meningitis, urinary tract infection, soft tissue infection
Infectious Dose	Unknown. <i>S. maltophilia</i> may colonize areas of the body without causing infection
Incubation Period	Unknown

MEDICAL PRECAUTIONS / TREATMENT

Prophylaxis	None available
Vaccines	None available
Treatment	Antibiotics as indicated by physician. Commonly used drugs include trimethoprim-sulfamethoxazole, ticarcillin-clavulanate, ceftazidime; depending on strain susceptibility
Surveillance	Monitor for symptoms and test using PCR or microbial isolation
UVM IBC Requirements	Report any exposures or signs and symptoms to your supervisor
Additional Medical Precautions	Emerging nosocomial pathogen. At risk populations include people with respiratory conditions, cancer, immunosuppression, or indwelling medical devices.

LABORATORY HAZARDS

Laboratory Acquired Infections	Unknown
Sources	Environmental bacterium found in aqueous habitats, including plant rhizospheres, animals, foods, and water sources

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, animal surgeries, cell sorting, pipetting, pouring liquids, sonicating, loading syringes
Primary containment device (BSC)	Use for aerosol-generating activities, large volumes, or high concentrations

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 UVMHC 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: <ol style="list-style-type: none"> Your immediate Supervisor The UVM Biosafety Officer at (802) 777-9471 and Risk Management at 6-3242 Risk Management and Safety; https://www.uvm.edu/riskmanagement/incident-claim-reporting-procedures

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)	

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VIABILITY	
Disinfection	Susceptible to 10% bleach, 4% paraformaldehyde; with a 15-minute contact time. Resistant to triclosan-containing soap.
Inactivation	Heating above 56°C for 15 minutes causes loss of cytotoxic activity
Survival Outside Host	Has been reported to survive for months on dry surfaces

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 press option 1 to speak to a dispatcher. Ask them to page Risk Management and Safety. Outside of a lab: Pull the nearest fire alarm and evacuate the building. Wait out front of the building for emergency responders to arrive.

REFERENCES	
ASM Clinical Microbiology Reviews	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3255966/
BMBL	https://www.cdc.gov/biosafety/publications/bmb15/
NIH Genetic & Rare Diseases Information Center	https://rarediseases.info.nih.gov/diseases/9772/stenotrophomonas-maltophilia-infection

STUDENT / EMPLOYEE NAME	SIGNATURE	DATE

Biosafety Review:

Jeff LaBossiere, Biological Safety Officer

Date

Principal Investigator: _____

IBC Registration #: _____