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](https://www.uvm.edu/rpo/biosafety-oversight). 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.**

1. **Submit the BARD along with your IBC master protocol registration, amendment, or continuing review.**

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| **Characteristics** |
| ***Morphology*** | Non-enveloped, double-stranded RNA virus, with a diameter of about 70 nm and wheel-like appearance.  |
| ***Strain Specific******Characteristics*** | Can be classified into seven major serotypes (A – G). Groups A – C infect both humans and animals, while groups D – G have only been found in animals. Group A is the most common rotavirus responsible for causing human illness. |

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| **health hazards** |
| ***Host Range*** | Humans and experimentally infected animals |
| ***Modes of Transmission*** | Most commonly transmitted through the fecal-oral route. Ingestion, mucous membrane contact, inhalation of aerosols suspected but unconfirmed. |
| ***Signs and Symptoms*** | Symptoms similar to those caused by other gastrointestinal agents, such as: fever, vomiting, and non-bloody diarrhea, leading to mild to severe dehydration and/or electrolyte imbalance. Infections are usually self-limiting and last for about 4 – 7 days. |
| ***Infectious Dose*** | Unknown |
| ***Incubation Period*** | 1 – 3 days |

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| **Medical precautions / treatment** |
| ***Prophylaxis*** | None |
| ***Vaccines*** | Oral vaccine available |
| ***Treatment*** | Supportive therapy, prevention of dehydration by replacement of fluid and electrolytes |
| ***Surveillance*** | Monitor for symptoms and test using ELISA or latex agglutination assay of stool sample, or electron microscopy |
| ***UVM IBC Requirements*** | Report any exposures or signs and symptoms to your supervisor |
| ***Additional Medical Precautions*** | Immunocompromised individuals are susceptible to developing more severe disease manifestations |

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| **laboratory hazards** |
| ***Laboratory Acquired Infections*** | None reported to date |
| ***Sources*** | Intestinal mucosa and stool of infected humans, infected laboratory cultures |

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| **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, animal manipulations, or high concentrations |

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| **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. The UVM Biosafety Officer at **(802) 777-9471** and Risk Management at **6-3242**
3. Risk Management and Safety; <https://www.uvm.edu/riskmanagement/incident-claim-reporting-procedures>
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| **Personal protective equipment (PPE)** |
| ***Minimum PPE Requirements*** | Nitrile gloves, lab coat or gown, appropriate eye/face protection. Wash hands after removing gloves. |
| ***Additional Precautions*** ***(Risk assessment dependent)*** |  |

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| **Viability** |
| ***Disinfection*** | Susceptible to 2% sodium hypochlorite, combinations of quaternary ammonium compounds with alcohols > 40% (such as Lysol), 2% glutaraldehyde, 2% formalin, iodine; all with a contact time of 10 minutes. |
| ***Inactivation*** | Inactivated by heating above 50°C for 30 minutes, and by pH < 3.0 |
| ***Survival Outside Host*** | Capable of surviving at ambient temperatures and can remain infectious on inanimate objects for up to 60 days. Medium or low humidity may enhance stability. |

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| **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. |

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| **Student / Employee Name SIGNATURE DATE** |
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***Biosafety Review:***

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Jeff LaBossiere, Biological Safety Officer

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| **References** |
| Canadian PSDS | <https://www.canada.ca/en/public-health/services/laboratory-biosafety-biosecurity/pathogen-safety-data-sheets-risk-assessment/human-rotavirus.html> |
| BMBL | <https://www.cdc.gov/biosafety/publications/bmbl5/> |
| CDC Guidelines  | <https://www.cdc.gov/rotavirus/index.html> |
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