

## **Biological Agent Reference Sheet (BARS)**

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## BIOLOGICAL AGENT REFERENCE SHEET

### Murine Cytomegalovirus (MCMV) & Rat Cytomegalovirus (RCMV)

CHARACTERISTICS	
<i>Morphology</i>	Herpes virus specific to mice (MCMV) and rats (RCMV). Enveloped DNA virus
<i>Growth Conditions</i>	Mouse and rat embryo fibroblasts, kidney cells

HEALTH HAZARDS	
<i>Host Range</i>	Mice (MCMV) and rats (RCMV). Not infectious to humans or other animals. MCMV is rare in laboratory mice but common in wild mice.
<i>Modes of Transmission</i>	MCMV and RCMV are excreted through tears, saliva, and urine. Vertical transmission may also occur. Natural infectious are localized to the salivary glands.
<i>Signs and Symptoms</i>	Natural infectious do not show any clinical signs. Lesions found at submandibular salivary gland. Latent infections found in many tissues. Minor central nervous system and myocardial symptoms may occur.
<i>Infectious Dose</i>	Unknown
<i>Incubation Period</i>	Infection in mice or rats is life-long.

MEDICAL PRECAUTIONS / TREATMENT	
<i>Prophylaxis</i>	None available
<i>Vaccines</i>	None available
<i>Treatment</i>	Depopulation of infected animals
<i>Surveillance</i>	Regular testing of colonies for antibodies to MCMV or RCMV
<i>Emory Requirements</i>	Report all exposures.

LABORATORY HAZARDS	
<i>Laboratory Acquired Infections (LAIs)</i>	Does not cause infection in humans
<i>Sources</i>	<a href="http://www.phac-aspc.gc.ca/lab-bio/res/psds-ftss/cytomegalovirus-eng.php">http://www.phac-aspc.gc.ca/lab-bio/res/psds-ftss/cytomegalovirus-eng.php</a>

SUPPLEMENTAL REFERENCES	
<i>Canadian MSDS</i>	<a href="http://www.phac-aspc.gc.ca/lab-bio/res/psds-ftss/cytomegalovirus-eng.php">http://www.phac-aspc.gc.ca/lab-bio/res/psds-ftss/cytomegalovirus-eng.php</a>
<i>Charles River</i>	<a href="http://www.criver.com/files/pdfs/infectious-agents/rm_ld_r_mouse_cytomegalovirus.aspx">http://www.criver.com/files/pdfs/infectious-agents/rm_ld_r_mouse_cytomegalovirus.aspx</a>
<i>BMBL: 5<sup>th</sup> Edition</i>	<a href="http://www.cdc.gov/OD/ohs/biosfty/bmb15/BMBL_5th_Edition.pdf">http://www.cdc.gov/OD/ohs/biosfty/bmb15/BMBL_5th_Edition.pdf</a>

CONTAINMENT REQUIREMENTS	
<i>BSL-2</i>	In vitro experiments involving MCMV or RCMV.
<i>ABSL-2</i>	House mice or rats infected with MCMV or RCMV at ABSL-2 to protect other mice or rats from becoming infectious.

SPILL PROCEDURES	
<i>Small</i>	Notify others working in the lab. Allow aerosols to settle. Don appropriate PPE. Cover area of the spill with paper towels and apply an EPA registered disinfectant, working from the perimeter towards the center. Allow 30 minutes of contact time before disposal and cleanup of spill materials.
<i>Large</i>	Contact Emory's Biosafety Officer (404-727-8863), the EHSO Office (404-727-5922), or The Spill Response Team (404-727-2888).

EXPOSURE PROCEDURES					
<i>Mucous membrane</i>	Flush eyes, mouth or nose for 15 minutes at eyewash station.				
<i>Other Exposures</i>	Wash area with soap and water for 15 minutes.				
<i>Reporting</i>	Immediately report incident to supervisor, complete an employee incident report in PeopleSoft.				
<i>Medical Follow-up</i>	<table border="0"> <tr> <td><b>7am-4pm (OIM):</b> EUH (404-686-7941) EUHM (404-686-7106) WW (404-728-6431)</td> <td><b>After Hours:</b> OIM NP On Call 404-686-5500 PIC# 50464</td> </tr> <tr> <td><b>Needle Stick (OIM):</b> EUH (404-686-8587) EUHM (404-686-2352)</td> <td><b>Yerkes:</b> Maureen Thompson Office (404-727-8012) Cell (404-275-0963)</td> </tr> </table>	<b>7am-4pm (OIM):</b> EUH (404-686-7941) EUHM (404-686-7106) WW (404-728-6431)	<b>After Hours:</b> OIM NP On Call 404-686-5500 PIC# 50464	<b>Needle Stick (OIM):</b> EUH (404-686-8587) EUHM (404-686-2352)	<b>Yerkes:</b> Maureen Thompson Office (404-727-8012) Cell (404-275-0963)
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VIABILITY	
<i>Disinfection</i>	30% ethanol and isopropanol, 1% sodium hypochlorite, formaldehyde, 0.12% ortho phenylphenol, and 0.04% glutaraldehyde
<i>Inactivation</i>	Heat (56°C for 30 minutes), low pH, UV light, cycles of freezing/thawing
<i>Survival Outside Host</i>	Dry surfaces (a few hours – 7 days); bedding – 2 hours; plexiglass – 4-8 hours

PERSONAL PROTECTIVE EQUIPMENT (PPE)	
<i>Minimum PPE Requirements</i>	At minimum, personnel are required to don gloves, closed toed shoes, lab coat, and appropriate face and eye protection prior to working with <i>MCMV</i> and <i>RCMV</i> . Additional PPE may be required depending on lab specific SOPs.
<i>Additional Precautions</i>	None available