

Biological Agent Reference Sheet (BARS)

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BIOLOGICAL AGENT REFERENCE SHEET

Chlamydia psittaci

CHARACTERISTICS	
<i>Morphology</i>	<i>Chlamydia psittaci</i> (also known as <i>Chlamydophila psittaci</i>) is a gram-negative bacterium and a zoonotic agent that commonly infects parrots and many other avian species and it is pathogenic in humans. <i>C. psittaci</i> is a coccoid, obligate intracellular bacteria. There are 16 genotypes of <i>C. psittaci</i> .
<i>Growth Conditions</i>	Chlamydiae have two forms during the life cycle, the infectious form (elementary form) is small and relatively inert, and the non-infectious form called reticulate body. Chlamydia must be isolated in tissue culture, mice, or chick embryos.

HEALTH HAZARDS	
<i>Host Range</i>	Mammals, including humans, exposed to birds or contaminated environments. Risk groups include bird owners, aviary and pet shop employees, poultry workers, and veterinarians.
<i>Modes of Transmission</i>	Birds are the natural reservoirs of <i>C. psittaci</i> and infection is usually acquired by inhaling dried secretions from infected birds.
<i>Signs and Symptoms</i>	In humans, fever, chills, headache, muscle aches, and a dry cough. Pneumonia is often evident on chest x-ray. Infected birds are often asymptomatic.
<i>Infectious Dose</i>	Unknown
<i>Incubation Period</i>	5-19 days

MEDICAL PRECAUTIONS / TREATMENT	
<i>Prophylaxis</i>	None
<i>Vaccines</i>	None
<i>Diagnosis & Treatment</i>	Serologic tests are used for diagnosis and results often need to be confirmed using molecular techniques. Tetracyclines are the treatment of choice.
<i>Surveillance</i>	Psittacosis is a reportable condition in most states.
<i>Emory Requirements</i>	Report all incidents using PeopleSoft

LABORATORY HAZARDS	
<i>Laboratory Acquired Infections</i>	Outbreaks of psittacosis in poultry processing plants have been reported. The CDC BMBL lists infections by <i>C. psittaci</i> as one of the ten most frequent laboratory acquired bacterial infections.
<i>Sources</i>	Contact with and exposure to infectious aerosols in handling, care, or necropsy of naturally or experimentally infected birds. <i>C. psittaci</i> may be present in feces, tissues, nasal secretions and blood of infected birds and in blood, sputum and tissues of infected humans.

SUPPLEMENTAL REFERENCES	
<i>CDC</i>	BMBL 5 th Ed. Accessed September 28, 2017 CDC. Compendium of measures to control Chlamydia psittaci infection among humans (psittacosis) and pet birds (avian chlamydiosis), 1998. MMWR 1998;47 (No. RR-10)- Accessed October 2, 2017
<i>Public Health Agency of Canada</i>	Pathogen Safety Data Sheet for <i>Chlamydophila psittaci</i> – Accessed October 2, 2017
<i>Center for Food Security & Public Health- ISU</i>	Psittacosis/ Avian Chlamydiosis- Accessed September 28, 2017

CONTAINMENT	
<i>BSL3/ABSL3</i>	BSL3 practices, containment equipment, and facilities are recommended for necropsy of infected animals and examination of tissues or cultures known to contain or be potentially infected with <i>C. psittaci</i> . <i>Special practices include wetting feathers of infected animals with a disinfectant prior to necropsy.</i>

SPILL PROCEDURES	
<i>Small</i>	Notify others working in the lab. Allow aerosols to settle. Don appropriate PPE. An EPA-registered disinfectant should be used to remove contaminating matter from surfaces (e.g., of bench tops and equipment). All decontaminated litter and other disposable materials should be autoclaved.
<i>Large</i>	For assistance, contact Emory's Biosafety Officer (404-727-8863), or the EHSO Spill 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 using PeopleSoft.	
<i>Medical Follow-up</i>	<u>7am-4pm (OIM):</u> EUH (404-686-7941) EUHM (404-686-7106) WW (404-728-6431)	<u>After Hours:</u> OIM NP On Call 404-686-5500 PIC# 50464
	<u>Needle Stick (OIM):</u> EUH (404-686-8587) EUHM (404-686-2352)	<u>Yerkes:</u> Maureen Thompson Office (404-727-8012) Cell (404-275-0963)

VIABILITY	
<i>Disinfection</i>	Susceptible to quaternary ammonium, 70% isopropyl alcohol, 10% freshly prepared bleach
<i>Inactivation</i>	It is expected to be susceptible to heat inactivation at 121°C for a minimum of 15 minutes (moist heat)
<i>Survival Outside Host</i>	<i>C. psittaci</i> elementary bodies (infectious form) can remain infectious in the environment for months. It has been reported to survive for 15 days on dry inanimate surfaces

PERSONAL PROTECTIVE EQUIPMENT (PPE)	
<i>Minimum PPE Requirements</i>	Personnel handling potentially infected birds are required to don two pairs of gloves, closed toed shoes, booties/shoe covers, lab coat, appropriate face and eye protection, and N-95 respirator. Additional PPE may be required depending on lab specific SOPs. Practice strict hand washing technique.
<i>Additional Precautions</i>	All procedures that may produce aerosols, or involve high concentrations or large volumes should be done in a BSC.