Biological Agent Reference Sheet (BARS)

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**BIOLOGICAL AGENT REFERENCE SHEET**

**Chlamydia psittaci**

### CHARACTERISTICS

**Morphology**

*Chlamydia psittaci* (also known as *Chlamydophila psittaci*) is a gram-negative bacterium and a zoonotic agent that commonly infects parrots and many other avian species and it is pathogenic in humans. *C. psittaci* is a coccoid, obligate intracellular bacteria. There are 16 genotypes of *C. psittaci*.

**Growth Conditions**

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

**Host Range**

Mammals, including humans, exposed to birds or contaminated environments. Risk groups include bird owners, aviary and pet shop employees, poultry workers, and veterinarians.

**Modes of Transmission**

Birds are the natural reservoirs of *C. psittaci* and infection is usually acquired by inhaling dried secretions from infected birds.

**Signs and Symptoms**

In humans, fever, chills, headache, muscle aches, and a dry cough. Pneumonia is often evident on chest x-ray. Infected birds are often asymptomatic.

**Incubation Period**

5-19 days

### MEDICAL PRECAUTIONS / TREATMENT

**Prophylaxis**

None

**Vaccines**

None

**Diagnosis & Treatment**

Serologic tests are used for diagnosis and results often need to be confirmed using molecular techniques. Tetracyclines are the treatment of choice.

**Surveillance**

Psittacosis is a reportable condition in most states.

**Emory Requirements**

Report all incidents using PeopleSoft

### LABORATORY HAZARDS

**Laboratory Acquired Infections**

Outbreaks of psittacosis in poultry processing plants have been reported. The CDC BMBL lists infections by *C. psittaci* as one of the ten most frequent laboratory acquired bacterial infections.

**Sources**

Contact with and exposure to infectious aerosols in handling, care, or necropsy of naturally or experimentally infected birds. *C. psittaci* may be present in feces, tissues, nasal secretions and blood of infected birds and in blood, sputum and tissues of infected humans.

### CONTAINMENT

**BSL3/ABSL3**

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 *C. psittaci*. Special practices include wetting feathers of infected animals with a disinfectant prior to necropsy.

### SPILL PROCEDURES

**Small**

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.

**Large**

For assistance, contact Emory’s Biosafety Officer (404-727-8863), or the EHSO Spill Team (404-727-2888)

### EXPOSURE PROCEDURES

**Mucous membrane**

Flush eyes, mouth or nose for 15 minutes at eyewash station.

**Other Exposures**

Wash area with soap and water for 15 minutes.

**Reporting**

Immediately report incident to supervisor, complete an employee incident report using PeopleSoft.

**Medical Follow-up**

7am-4pm (OIM): EUH (404-686-7941) 
EUHM(404-686-7106) 
WW (404-728-6431) 

After Hours: OIM NP On Call 404-686-5500 
PIC# 50464

Needle Stick (OIM): EUH (404-686-8587) 
EUHM (404-686-2352)

**Yerkes: Maureen Thompson Office (404-727-8012) 
Cell (404-275-0963)**

### VIABILITY

**Disinfection**

Susceptible to quaternary ammonium, 70% isopropyl alcohol, 10% freshly prepared bleach

**Inactivation**

It is expected to be susceptible to heat inactivation at 121°C for a minimum of 15 minutes (moist heat)

**Survival Outside Host**

*C. psittaci* 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)

**Minimum PPE Requirements**

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.

**Additional Precautions**

All procedures that may produce aerosols, or involve high concentrations or large volumes should be done in a BSC.