

Brucella (melitensis, abortus and suis)

According to the U.S. Centers for Disease Control and Prevention (CDC), brucellosis continues to be the most commonly reported laboratory-associated bacterial infection. *Brucella spp.* may be present in blood, cerebrospinal fluid, semen and, occasionally, urine. Aerosol generating laboratory procedures, sniffing of cultures, mouth pipeting and accidental parenteral inoculations have been implicated in laboratory associated cases.

Symptoms: Symptoms may persist for long periods of time. In some cases, symptoms may never resolve or may reoccur.

- Brucellosis symptoms can include: fever; sweats; malaise; anorexia; headache; pain in muscles, joints and/or back; and fatigue.
- Symptoms can include: recurrent fevers, arthritis, swelling of the testicle and scrotum area, endocarditis, neurologic symptoms, chronic fatigue, depression, and swelling of the liver and/or spleen.

Risk Assessment:

- **High exposure risk:** An individual performing the following activities or within 5 feet of someone performing the following activities: work with a *Brucella* isolate, sniffed or opened culture plate, mouth pipetted specimen material, work in a Class II Bio-Safety cabinet or on an open bench without using BSL-3 precautions; any person in a room where widespread aerosol generating procedures are performed. If the worker is pregnant, she should consult with an obstetrician.
- **Low exposure risk:** Worker greater than 5 feet from workup and identification of a *Brucella* isolate
- **Laboratory employees may be exposed to aerosols and infectious droplets if using automated biochemical systems, manual multi-test kits or single biochemical tests for identifications outside of a bio-safety cabinet.**

If an employee may have been exposed, seek immediate medical attention.

Reference risk assessments for specific laboratory procedures and laboratory exposure surveillance:

<http://www.cdc.gov/brucellosis/laboratories/risk-level.html>

Treatment: <http://www.cdc.gov/brucellosis/treatment/index.html>

References: <http://www.cdc.gov/brucellosis/clinicians/index.html>; <http://www.cdc.gov/brucellosis/clinicians/brucella-species.html>; <http://www.cdc.gov/brucellosis/symptoms/index.html>; <http://www.cdc.gov/brucellosis/veterinarians/>

Referred cultures confirmed by the Illinois Department of Public Health (IDPH) laboratories must be reported to the U.S. Centers for Disease Control and Prevention (CDC) by IDPH and by the submitting laboratory.

- Each facility will complete APHIS/CDC Form 4, which is to be sent to CDC within seven calendar days of the identification of the select agent.
- If an exposure has occurred, the facility must complete APHIS/CDC Form 3. Form 3 must be sent to CDC within seven calendar days of the identification of the select agent.
- Forms and instructions are available at www.selectagents.gov.

For questions concerning testing or reporting, contact the Illinois Department of Public Health Division of Laboratories.

IDPH Springfield Laboratory, Clinical Microbiology, 217-782-6562

IDPH Chicago Laboratory, Clinical Microbiology, 312-793-4760

IDPH Carbondale Laboratory, Clinical Microbiology, 618-457-5131