

**The University of Tennessee  
Institutional Animal Care and Use Committee  
Occupational Health Program**

**BRUCELLOSIS**

**People at Risk:** The incidence of brucellosis, which is caused by *Brucella spp.*, in cattle in the United States is low because of herd eradication programs. There are no infected cattle herds in the state of Tennessee. Nationally there are only 10 infected cattle herds. The animals most commonly associated with brucellosis infection is the dog (*B. Canis*) and pigs (*B. Suis*). However, infection is in domestic swine but more common in dogs and feral swine.

**Transmission:** Reported human cases have resulted from contact with infected animals, especially aborted fetuses, fluids or membranes, or urine. Direct contact with skin or mucous membranes during specimen handling or preparation in the laboratory can result in transmission. Aerosol transmission is also possible in laboratories working with this bacteria. In some cases, infection has resulted from inadvertent self-inoculation or syringe splash to the face or eyes from *B abortus* strain 19 vaccine.

**Symptoms:** Human infection with *Brucella sp* is characterized by fever, headache, chills, muscle pain, nausea, and weight loss. Bacteria can be spread by the bloodstream, resulting in disease in the lymph nodes and spleen. Human infection with *B. Suis* is usually mild in immunocompetent people.

**Prevention:** The disease is diagnosed by a blood test or by culturing the organism in affected people. Preventive measures should consider excluding infected animals from the facility. Animal handlers should wear appropriate personal protective equipment (lab coats, gloves), and practice proper personal hygiene (hand washing).