### TULAREMIA

#### Source:
- Water, soil
- Wild animals (rabbits, rodents)
- Domesticated animals
- Blood-sucking arthropods (ticks)

#### Transmission
- Bite of an infected arthropod
- Direct contact with infected animal
- Ingestion of infected animal
- Inhalation of aerosolized organisms

#### Infectious dose:
10 to 50 organisms

#### Incubation
3-5 days (1-20 days)

#### Clinical case definition
- Chills, fever, myalgia, headache, skin rash
- Ulceroglandular: cutaneous ulcer with regional lymphadenopathy
- Glandular: regional lymphadenopathy with no ulcer
- Oculoglandular: severe conjunctivitis with preauricular lymphadenopathy
- Oropharyngeal: exudative stomatitis, pharyngitis, tonsillitis; cervical lymphadenopathy
- Intestinal: abdominal pain, vomiting, diarrhea
- Pneumonic: fever, dry cough, chest pain, hilar adenopathy
- Typhoidal: high fever, hepatomegaly, splenomegaly

#### Complications:
- Suppuration of involved lymph nodes, renal failure, jaundice, hepatitis, rhabdomyolysis
- Death rate: < 4%

#### Differential:
- Similar to many other diseases including cat-scratch disease, Q fever, streptococcal pharyngitis (pneumonic), syphilis, tuberculosis, anthrax, plague, herpes simplex virus infection

#### Francisella tularensis, Gram negative coccobacillus

### Lab Diagnosis
- Polymerase chain reaction assays
- Serologic testing:
  - Single serum antibody titer of ≥ 1:128 by microagglutination or ≥ 1:160 by tube agglutination
  - Fourfold titer change between 2 sera obtained at least 2 weeks apart
- Direct fluorescent antibody staining of smears and tissues

### Probable: Clinically compatible case with either
- Elevated serum antibody titers to *F. tularensis* antigen with no history of tularemia vaccination or
- Detection of *F. tularensis* in a clinical specimen by fluorescent assay

### Confirmed: Clinically compatible case with either
- Isolation in a clinical specimen or
- Four-fold ↑ in serum antibody titer

### Treatment, Prophylaxis

#### Treatment
- Streptomycin
  - 7.5 to 10 mg/kg IM q 12 hours for 7 - 14 days
  - In very sick patients, 15 mg/kg q 12 hours may be given throughout a 7- to 10-day course.
- Pediatric: 30 to 40 mg/kg/day intramuscularly in 2 divided doses for 7 days
- Gentamicin is an alternative
- Doxycycline, ciprofloxacin, imipenem-clavulanate, and chloramphenicol may be used for less severe cases but have higher relapse rates

#### Prophylaxis
- Not recommended after potential exposures of unknown risk (tick bites).

### Control

#### Preventive measures:
- Wear protective clothing & insect repellents to prevent arthropod bites
- Wear rubber gloves, masks, protective eye cover when handling dead animals (hunters, trappers, etc.)
- Cook wild game thoroughly

### Standard precautions

#### Report case immediately to OPH

http://www.infectiousdisease.dhh.louisiana.gov

(800)256-2748