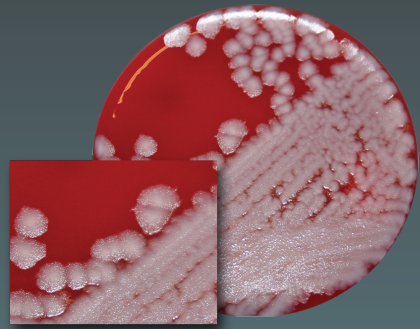
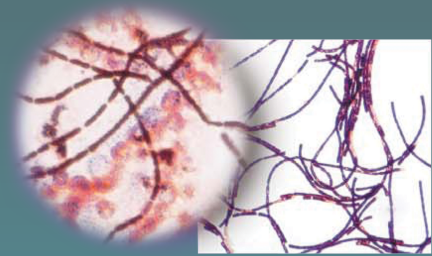


# Bioterrorism Agents

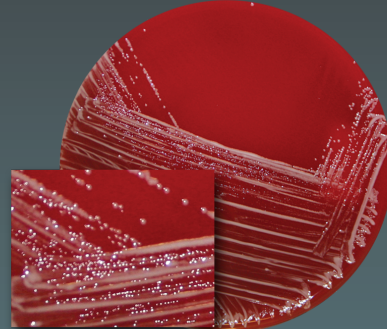


anthrax

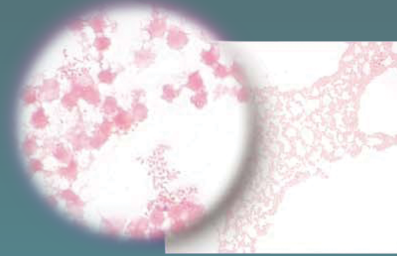


*Bacillus anthracis*

- Large, Gram positive, spore-forming bacilli
- Ground-glass appearance with irregular edges
- Non-hemolytic
- Non-motile
- Sticky, adheres to agar surface
- Catalase positive

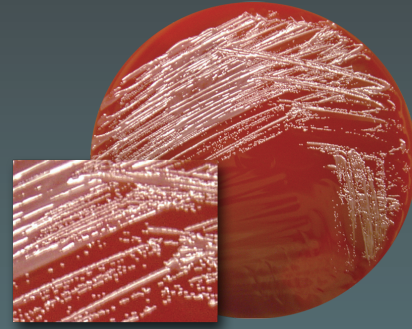


brucellosis

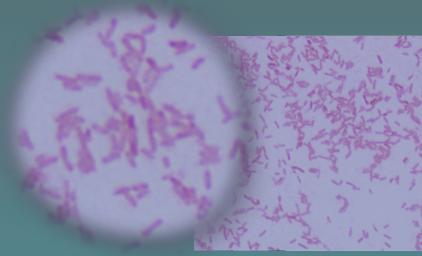


*Brucella species*

- Faintly staining, tiny Gram negative coccobacilli
- Non-pigmented, small gray colonies
- Slow growing, 48-72 h
- Catalase positive
- Oxidase positive
- Nitrate positive
- Urea positive
- X and V factors not required

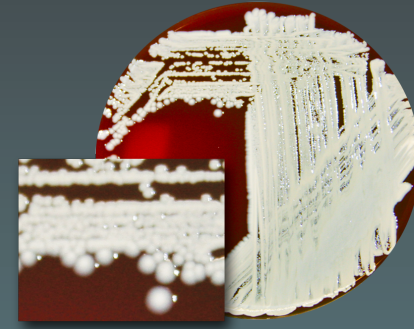


glanders

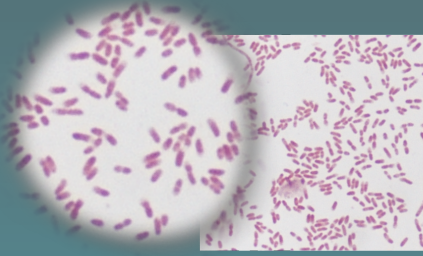


*Burkholderia mallei*

- Faintly staining, Gram negative bacilli or slightly curved coccobacilli
- Pinpoint to small gray colonies at 24 h
- Slow growing
- Catalase positive
- Oxidase variable
- Indole negative
- Non-motile

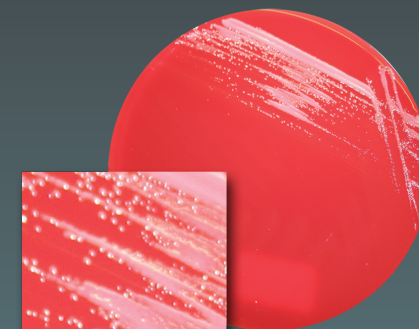


melioidosis

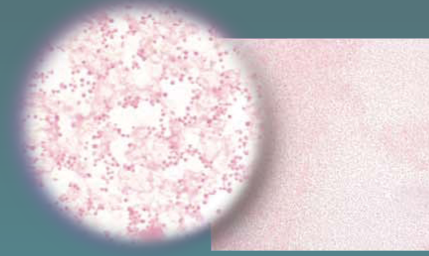


*Burkholderia pseudomallei*

- Gram negative bacilli
- Smooth, creamy white colonies that may become wrinkled
- Poor growth at 24 h; Good growth at 48 h
- Catalase positive
- Oxidase positive
- Indole negative
- Motile

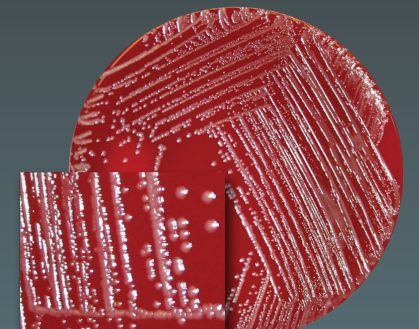


tularemia

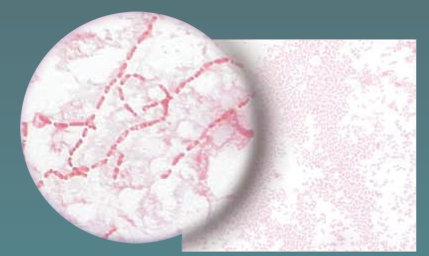


*Francisella tularensis*

- Faintly staining, tiny Gram negative coccobacilli
- Small gray to grayish white colonies
- Slow growing greater than 48 h
- Catalase positive (weak)
- Oxidase negative
- Urea negative
- Nitrate negative
- X and V factors not required



plague



*Yersinia pestis*

- Gram negative bacilli, may exhibit bipolar, "safety-pin" appearance
- Gray white opaque pinpoint colonies
- Slow growing at 35°C
- Catalase positive
- Indole negative
- Lactose negative
- Oxidase negative
- Urea negative