Microbiology (Bio 206) #37:
The Plague

Terms you should know:
- systemic
- amplifying host
- septicemia

_Yersinia pestis_

Description: Gram negative rod; ends stain darker than middle
Member of the enterobacteria family (but not an enteric pathogen)

Diseases:
- Plague (black plague, bubonic plague, black death)
  - Bubonic plague = initial stage; swollen, necrotic lymph nodes (buboes)
  - Septicemic plague = spread to blood (septicemia)
  - Pneumonic plague = spread to lungs (100% fatal)

Virulence factors:
- Capsule
- Toxin that inhibits the electron transport system

Treatment: Streptomycin; must be treated early: death occurs in 2-4 days and pneumatic plague is 100% fatal

Reservoir and spread:
- Animal reservoir (mice, voles and other rodents that don’t get sick)
- Amplifying hosts: rats, ground squirrels, etc. (do get sick)
- Transmitted by flea bite (multiplies in flea and blocks esophagus)
- Pneumonic form transmitted by respiratory route
- Most US cases are in Arizona and New Mexico

Ring around the rosy
Pocket full of posies
Ashes! Ashes!
We all fall down!