

Biology
Classification / Microbes
2012 - 2013
#5

- I. Bacteria and disease – history
 - A. Louise Pastuer (1880's) → “What causes disease?”
 1. Germ Theory of Disease = microorganisms in the air cause disease and food spoilage
 - B. Joseph Lister (1860's) → “How do we kill those germs?”
 1. antiseptics = safe on living tissues
 2. disinfectants = not safe on tissues
 - C. Robert Koch (early 1900's) → “What germs are responsible for what disease?”
 1. Koch's Postulates
 - suspected pathogen must be found in all sick subjects and absent in healthy subjects
 - suspected pathogen is collected and grown in a lab (culture)
 - sample of culture is introduced into a healthy subject → subject gets sick
 - sample from newly infected subject matches the lab culture
 - D. Alexander Flemming (1940's) → “How do we treat people who have these germs?”
 1. Discovered the first antibiotic = drug that kills bacteria in body
 - common antibiotics = ampicillin, zithromycin, ampicillin
 2. Discovered that bacteria can become resistant to antibiotics
 - result of natural selection (strongest bacteria survive)
 - important to finish entire prescription of antibiotics

