

# CLASS REVIEW SESSION II

- I. BACTERIAL PHYLOGENY
  - THE THREE DOMAINS: BACTERIA, ARCHAEA & EUKARYA
  - THE BACTERIA (EUBACTERIA)
    - PROTEOBACTERIA
      - FIVE SUBDIVISIONS:  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$  &  $\epsilon$
    - GRAM POSITIVE BACTERIA
      - LOW GC (spore-formers, mycoplasmas)
      - HIGH GC (filamentous, acid-fast)
    - CHLAMYDIA (obligate intracellular parasites)
    - SPIROCHETES (sheath & axial filaments)
- II. VIRUSES
  - GENERAL CHARACTERISTICS
  - PHAGE & PLANT VIRUSES
  - HUMAN (ANIMAL) VIRUSES
    - FOUR DNA VIRUS FAMILIES
    - FOUR RNA VIRUS FAMILIES
  - SUBVIRAL PARTICLES: viroids & prions
- III. INFECTION AND DISEASE
  - SYMBIOTIC RELATIONSHIPS
  - VIRULENCE FACTORS
    - TOXINS: exotoxin & endotoxin
    - OTHER FACTORS
- IV. DEFENSE MECHANISMS
  - NON-SPECIFIC
    - BARRIERS (SKIN: pH, FATTY ACIDS, ETC.)
    - BLOOD CELL TYPES
    - INFLAMMATION AND PHAGOCYTOSIS
    - COMPLEMENT & INTERFERON
  - SPECIFIC - THE IMMUNE SYSTEM
    - TYPES OF IMMUNITY
    - DUALITY OF THE IMMUNE SYSTEM
      - HUMORAL IMMUNITY
        - B CELLS
        - ANTIBODY AND ANTIGENS
      - CELL-MEDIATED IMMUNITY
        - T CELLS
        - CELL KILLING
    - THE ANAMNESTIC RESPONSE & MEMORY CELLS