

# MICROBIOLOGY

## VACCINES & DIAGNOSTIC IMMUNOLOGY

### IV. VACCINES

#### A. INTRODUCTION AND HISTORY

1. SMALLPOX
  - a. VARIOLATION
  - b. VACCINATION
  - c. HERD IMMUNITY
2. CHARACTERISTICS OF VACCINES
  - a. INACTIVATED OR ATTENUATED
  - b. BACTERIAL OR VIRAL
  - c. TOXOIDS
  - d. EXTRACTS
  - e. VIRUSES
  - f. PROTEINS OR CARBOHYDRATES

#### B. BACTERIAL VACCINES

1. EXTRACT VACCINES-- OLD PERTUSSIS VACCINE
2. CARBOHYDRATE VACCINES--MENINGOCOCCUS, Hib & PNEUMOCOCCUS
3. TOXOID VACCINES--TETANUS & DIPHTHERIA
4. ATTENUATED VACCINES--BCG STRAIN FOR TB

#### C. VIRAL VACCINES

1. INACTIVATED VIRUSES--INFLUENZA & SALK POLIO
2. ATTENUATED VACCINES--SABIN POLIO & MMR
3. SUBUNIT VACCINE--HEPATITIS B & NEW PERTUSSIS

#### D. PEDIATRIC VACCINES

1. DTP
2. IPV & OPV - POLIO
3. MMR & VARICELLA
4. HEPATITIS B
5. Hib & PNEUMOCOCCUS

#### E. VACCINE DEVELOPMENT

1. SUBUNIT (OR RECOMBINANT) VACCINES
2. ACELLULAR AND CONJUGATED VACCINES
3. ANTI-IDIOTYPIC & DNA VACCINES

### V. DIAGNOSTIC IMMUNOLOGY

#### A. PRECIPITATION REACTIONS

1. OUCHTERLONY PLATES
2. IMMUNO-ELECTROPHORESIS

#### B. AGGLUTINATION REACTIONS

#### C. COMPLEMENT FIXATION

#### D. FLUORESCENT-ANTIBODY TECHNIQUES

#### E. ELISA TESTS

#### F. WESTERN BLOT TESTS

### VI. IMMUNOSUPPRESSION

#### A. GENETIC

#### B. ENVIRONMENTAL

1. CANCERS
2. DRUGS
3. AIDS