

Antibodies and Antigens

Chapter 5

- I. Introduction
 - A. Antibodies = Ab
 - B. Antigens = Ag
 - C. Location
 - D. Blood Ab vocabulary
 - 1. plasma
 - 2. serum
 - 3. serology
 - 4. antiserum
 - 5. titer
- II. Molecular Structure of Abs
 - A. General features of Ab structure
 - 1. Immunoglobulins (Ig)
 - 2. Ig domain
 - B. Side to side
 - 1. heavy chains
 - 2. light chains
 - a. lambda, kappa
 - C. Top to Bottom
 - 1. Function
 - a. Fab
 - b. Hinge
 - c. Fc
 - 2. Sequence
 - a. Variable region
 - 1) hypervariable regions
 - a) CDRs
 - b. Constant region
 - 1) membrane bound
 - D. Classes = isotypes
 - 1. IgM
 - 2. IgG
 - a. colostrum
 - 3. IgA
 - a. MALT
 - b. J chain
 - 4. IgD
 - 5. IgE
- III. Antibody Binding of Antigens
 - A. Features of Biologic Antigens
 - 1. immunogen
 - 2. antigen
 - a. hapten
 - 3. epitope
 - B. Structural and Chemical Basis of Ag Binding
 - 1. affinity, K_d
- IV. Monoclonal Abs
 - A. Credit
 - B. Defined
 - C. Procedure - hybridoma
 - D. Uses
 - E. Polyclonal Abs