

- I. Overview
 - A. humoral immunity
 - 1. Active immunity
 - 2. Passive immunity
- II. How Abs work
 - A. Neutralization
 - B. Agglutination / precipitation
 - C. Opsonization
 - 1. FcR
 - 2. Fc γ
 - a. Fc γ R1
 - b. Fc γ RII
 - c. Fc γ RIII
 - D. ADCC
 - 1. NK cells
 - a. Fc γ RIIIA
 - E. Clearance of Helminths
 - 1. eosinophils
 - 1) major basic protein
 - 2. mast cells
- III. Complement
 - 1. background
 - 2. history
 - A. Classical Complement activation
 - 1. C1
 - a. C1q, C1r, & C1s
 - 2. C4
 - 3. C2
 - a. classical pathway C3 convertase
 - 4. C3
 - a. C5 convertase
 - 5. C5
 - 6. C6 & C7
 - 7. C8
 - 8. C9
 - 9. MAC
 - B. Alternate Complement Cascade
 - 1. C3b
 - 2. Factor B
 - 3. Factor D
 - C. Lectin Complement Cascade
 - 1. MBL or ficolin
 - 2. MASPs

D. Functions of complement system

1. MAC
2. opsonization
 - a. CR1
 - b. C3b & C4b
3. inflammation
 - a. C5a
4. B cell responses
 - a. C3d
 - 1) CR2

E. Regulation of Complement Activation

1. C1 inhibitor
2. Decay-accelerating factor
3. Factor H
4. Factor I
5. Membrane cofactor protein
6. CD59

IV. Evasion of Complement by Microbes