

Biochemistry

Chapter 2b

I. Organic Substances

1. Carbon
 - a. electroneutral
 - b. 4 covalent bonds
 - c. small

A. Carbohydrates

1. monosaccharide
2. disaccharides
3. polysaccharides
 - 1) monomers
 - 2) polymers

B. Lipids

1. Triglycerides
 - a. composition
 - 1) fatty acids
 - 2) glycerol
 - b. structure
 - 1) saturated
 - 2) unsaturated
2. Modified Triglycerides
 - a. phospholipids
 - 1) amphipathic
 - b. others
3. Steroids
 - a. cholesterol

C. Proteins

1. amino acids
 - a. R group
2. assembly
 - a. peptide bond
3. structural levels
 - a. Primary
 - b. Secondary
 - 1) alpha (α) helix
 - 2) beta (β) sheet
 - c. Tertiary
 - 1) globular
 - 2) fibrous
 - d. Quaternary
4. Denaturation
5. Enzymes
 - 1) E of activation
 - a. Cofactors
 - b. Naming = -ase
 - c. Enzyme anatomy
 - 1) enzyme
 - 2) substrate(s)
 - 3) active site
 - 4) product(s)

D. Nucleic Acids

1. Composition

a. Nucleotides

1) pentose sugar

2) bases

a) Adenine

b) Guanine

c) Cytosine

d) Thymine

e) Uracil

3) phosphate

2. Function

3. DNA vs RNA

a. sugar

b. structure

c. bases

d. half life

4. ATP