MIT Department of Biology 7.013: Introductory Biology - Spring 2005 Instructors: Professor Hazel Sive, Professor Tyler Jacks, Dr. Claudette Gardel

## *BIOCHEMISTRY* The cell as a factory **2.7.05, 2.9.05, 2.11.05**

macromolecule

polymer

monomer

covalent bond

ionic bond

hydrogen bond

van der Waals bond

hydrophobic bond

polar molecule

7.013 Spring 2005

non-polar molecule

electronegativity

condensation

hydrolysis

lipids

triglyceride

phospholipid

membrane

saturated fat

unsaturated fat

steroid

carbohydrate

monosaccharide

disaccharide

polysaccharide

glycosidic linkage (bond)

nucleic acids

nucleotide

ribose

deoxyribose

base

polarity

linear order

base pairing

sugar-phosphate backbone

double helix

metabolism

catabolic reaction

anabolic reaction

protein

amino acid

peptide bond

chaperonin

protein folding

primary protein structure

secondary protein structure

tertiary protein structure

quaternary protein structure

potential energy

kinetic energy

enthalpy

free energy

entropy

∆G

spontaneous reaction

equilibrium

Keq

**Reaction rate** 

Catalyst

**Transition state** 

**Activation energy** 

Enzyme

Substrate

Cofactor

Coenzyme

**Prosthetic group** 

**Competitive inhibitor** 

Non-competitive inhibitor

Allostery

Irreversible inhibitor

Feedback regulation

Homeostasis

ATP

NAD+

**Redox reaction** 

Glycolysis

Respiration