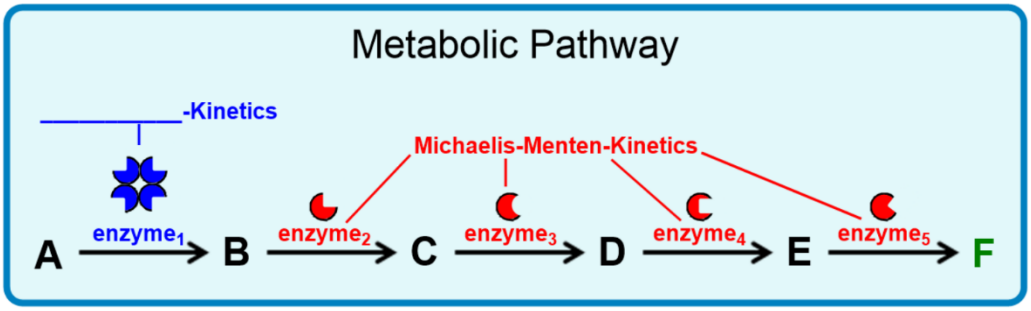
CONCEPT: ALLOSTERIC REGULATION

●Recall: *Metabolic* _____: a series of chemical reactions related to a critical biological process (ex. glycolysis).

●Most enzymes in a metabolic pathway follow the *Michaelis-Menten kinetics* that we've already covered; HOWEVER….

□ ….most metabolic pathways have *at least one* enzyme that has an even *greater* effect on the _____.

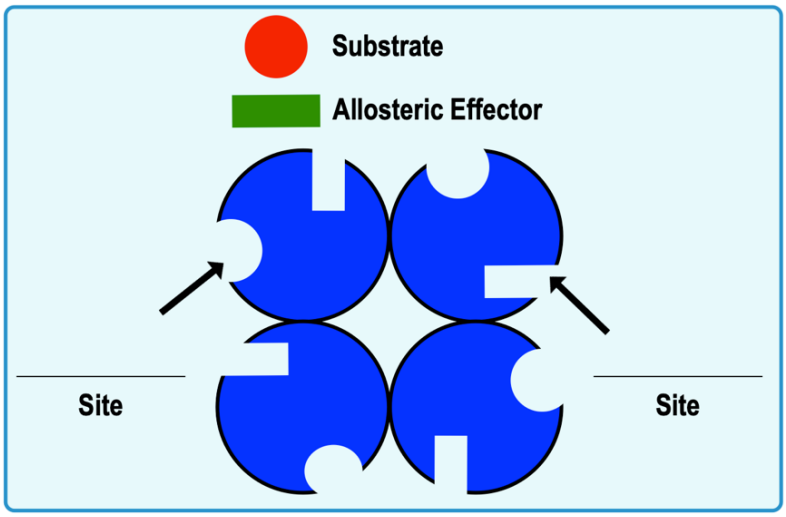
□ These enzymes are called _____ enzymes & display *allosteric kinetics*.



Allosteric Enzymes

●_____ *enzymes*: complex, *highly regulated* enzymes monitoring flow of biochemicals in *metabolic pathways*.

□ Allosteric enzymes catalyze/control _____ steps in metabolic pathways.



●Allosteric enzymes usually have _____ polypeptide chains (quaternary structure) that each have active sites.

●*Allosteric* enzymes are called so because they're regulated by *allosteric* _____.

□ *Allosteric effectors*: small molecules that bind to _____ sites on the enzyme to *regulate* its activity.

PRACTICE: Allosteric enzymes:

a) Are regulated primarily by covalent modifications.
b) Usually have more than one polypeptide chain.
c) Usually catalyze multiple reactions within a metabolic pathway.
d) Usually only have one active site.
e) Usually show Michaelis-Menten kinetics.