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Uncompetitive inhibition :-

Uncompetitive inhibitor can bind only to the enzyme Substrate (ES) complex. It does not have affinity for free enzyme. Enzyme Substrate inhibition complex (ESI) does not continue to form any product. Uncompetitive inhibition can not overcome by the addition of ~~the~~ more Substrate. Consequent Vmax cannot be allowed even at high Substrate concentration.

Irreversible Enzyme inhibition—

Notes : Irreversible inhibitor ~~and~~ bind tightly covalently form stable complex. ~~It~~ They are those that combine with a destroy a functional group on the enzyme

that is essential for the activity.
It dissociate very ~~to~~ slowly from its target enzyme because it became very tightly bound to its active site thus inactivating the enzyme molecules. It cannot ~~by~~ be released by dilution or dialysis or simply increasing the concentration of substrate. They are devided into three main catagories -

(a) Substrate analogue inhibitor a label affinity are molecule that are structurally similar to the substr
It possess highly reactive group which is not present in the natural subst
The reactive group of the substrate analogue covently react with amino

residue of the active site enzyme and permanently block the active site of the enzyme.

2. Suicide inhibitor or mechanism based inactivator are molecule that are structurally similar to the substrate. The compound relatively unreactive untill they bind to the active site of the specific enzyme. It is designed to carry out the first few chemical steps of the catalytic activity of the normal enzyme reaction. Instead of being transformed into normal product, the inhibitor is converted to a very reactive compound that combine irreversibly to the enzyme. These are also called mechanism based enzyme inactivator because they

utilize the normal enzyme react mechanism to inactivate the enz

Group Specific inhibitor – The inhibitor react with the specific (R-group (side chain) of amino acid residues in the active site of the enzy

e.g. 1. Diisopropyl phosphoflouride (DIPF

2. Iodoacetamide

3. Heavy Metals

Notes :