

Receptor Tyrosine kinase: (phosphorylates itself)

(as side 31) When signaling molecules reach Tyrosines, 2 Tyrosines combine + phosphorylate themselves + activate relay proteins

ligand-gated ion channel: signaling molecule binds to receptor + opens the channel to allow ions to flow down their concentration gradient

Small hydrophobic hormones can cross plasma membrane + enter the cell

We have more than 1 step in signaling to regulate + amplify the signal

Phosphorylation changes the shape of proteins to turn them on or off

Protein phosphatases remove phosphates to change shape + turn it on/off

* Cyclic AMP = 1 of the most widely used second messengers

- Adenyl cyclase converts ATP to cAMP

There is a low concentration of calcium in the cytoplasm b/c it binds to phosphate + form a solid so it can not be used for ATP, respiration, protein structure, + phospholipids + DNA + RNA

- E-space has a slightly higher concentration