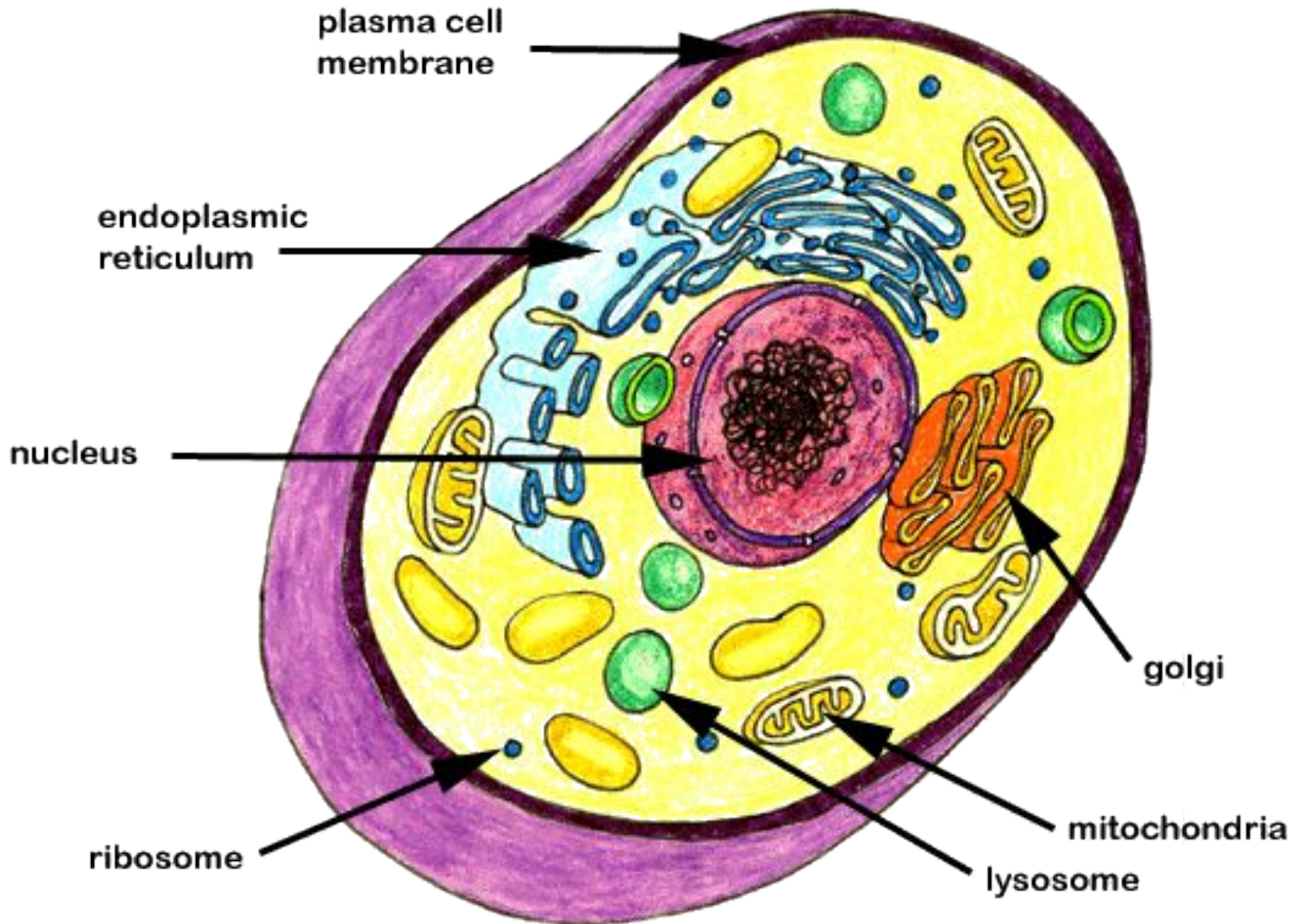
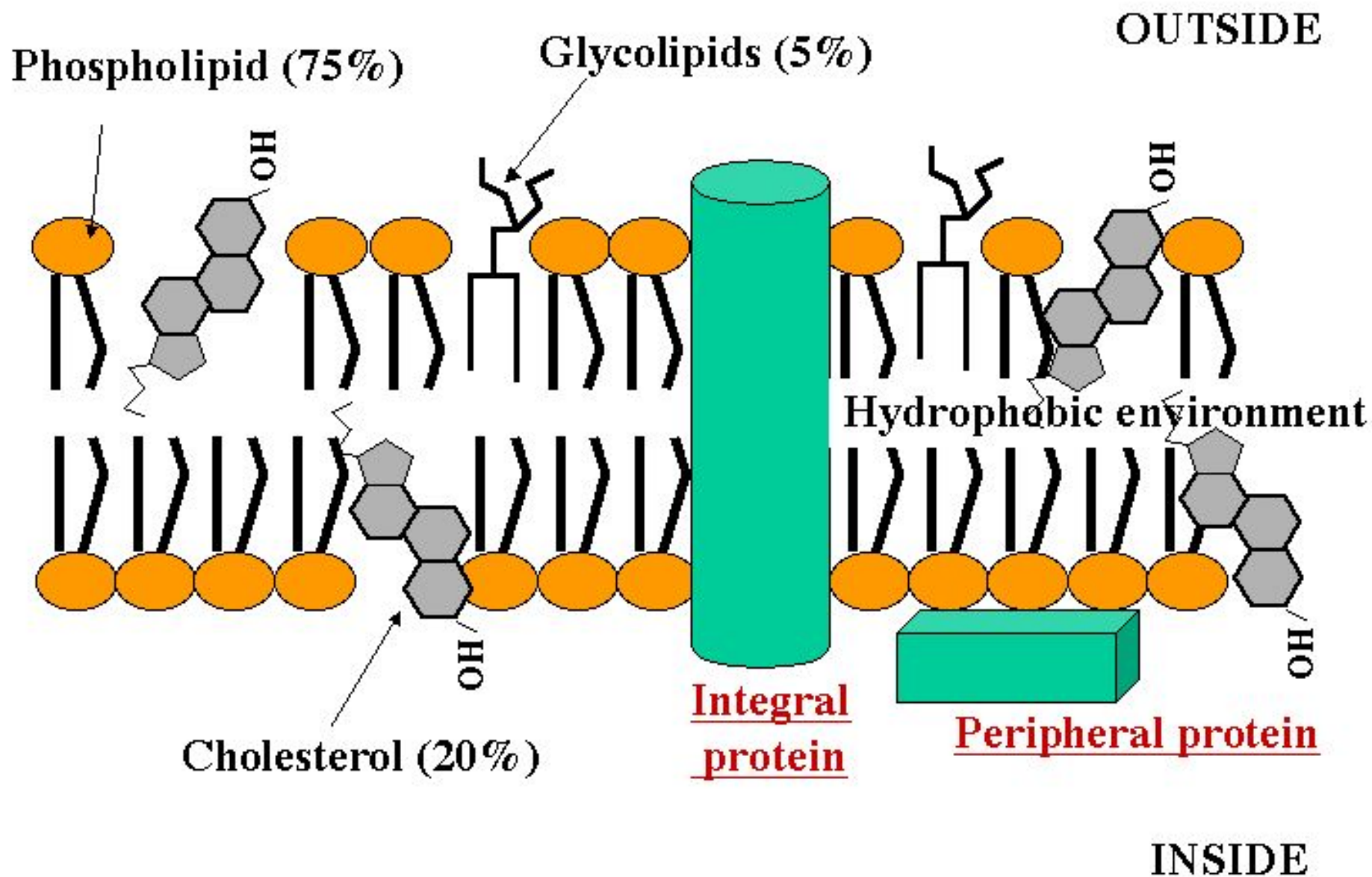


Structure and Functions of Biomembranes

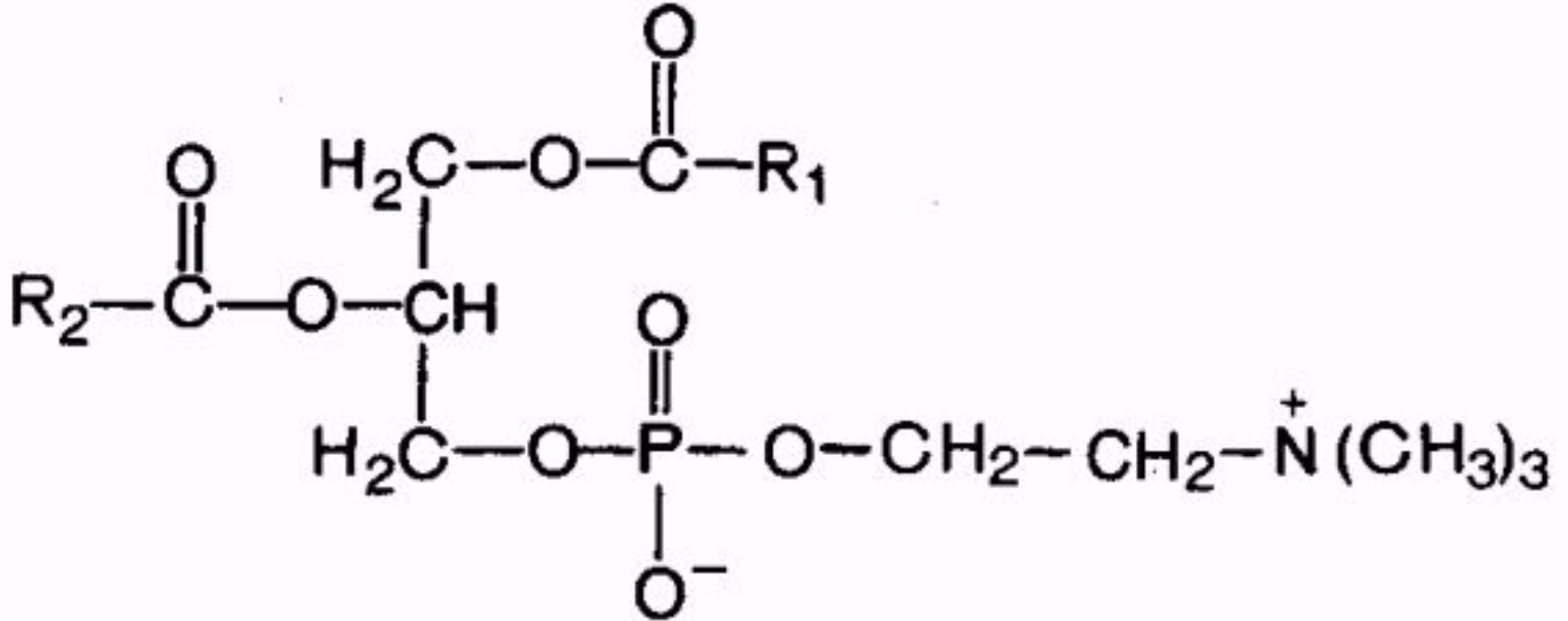
Cell structure



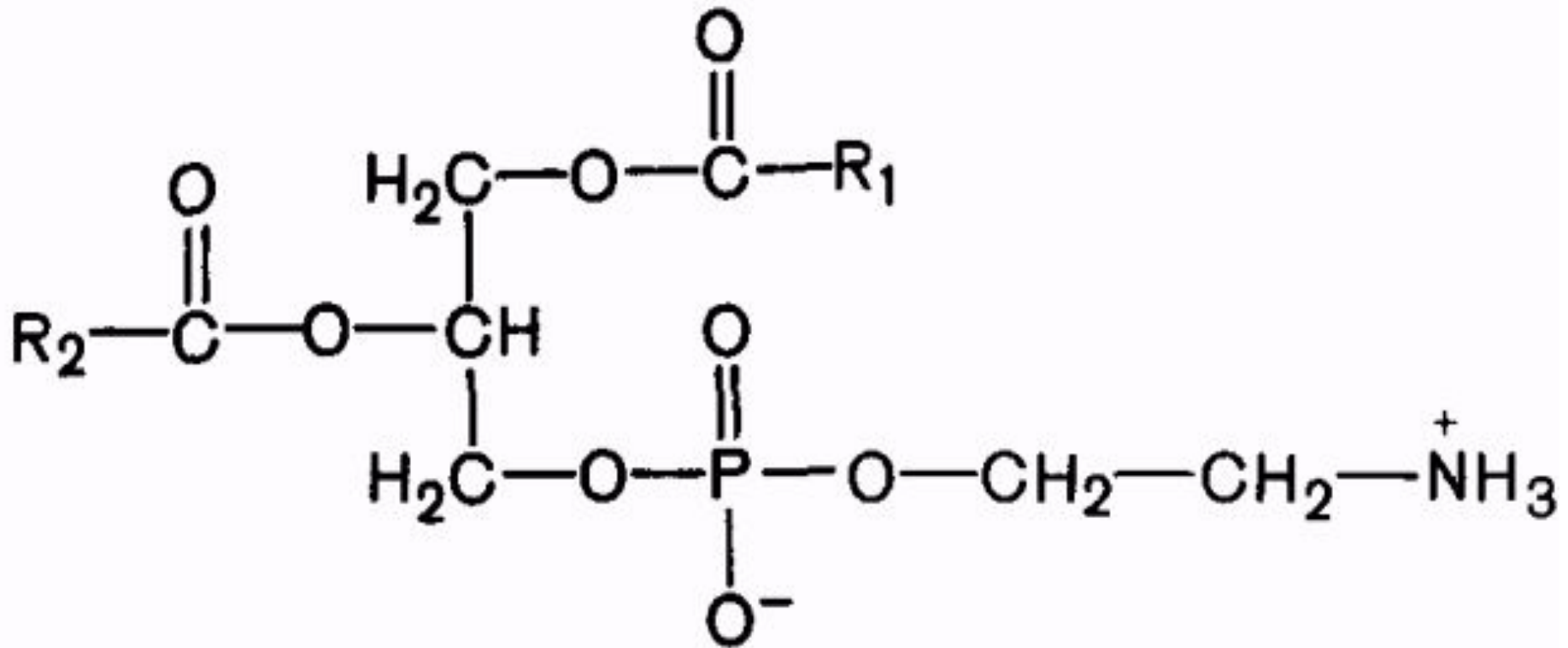
Plasma membrane



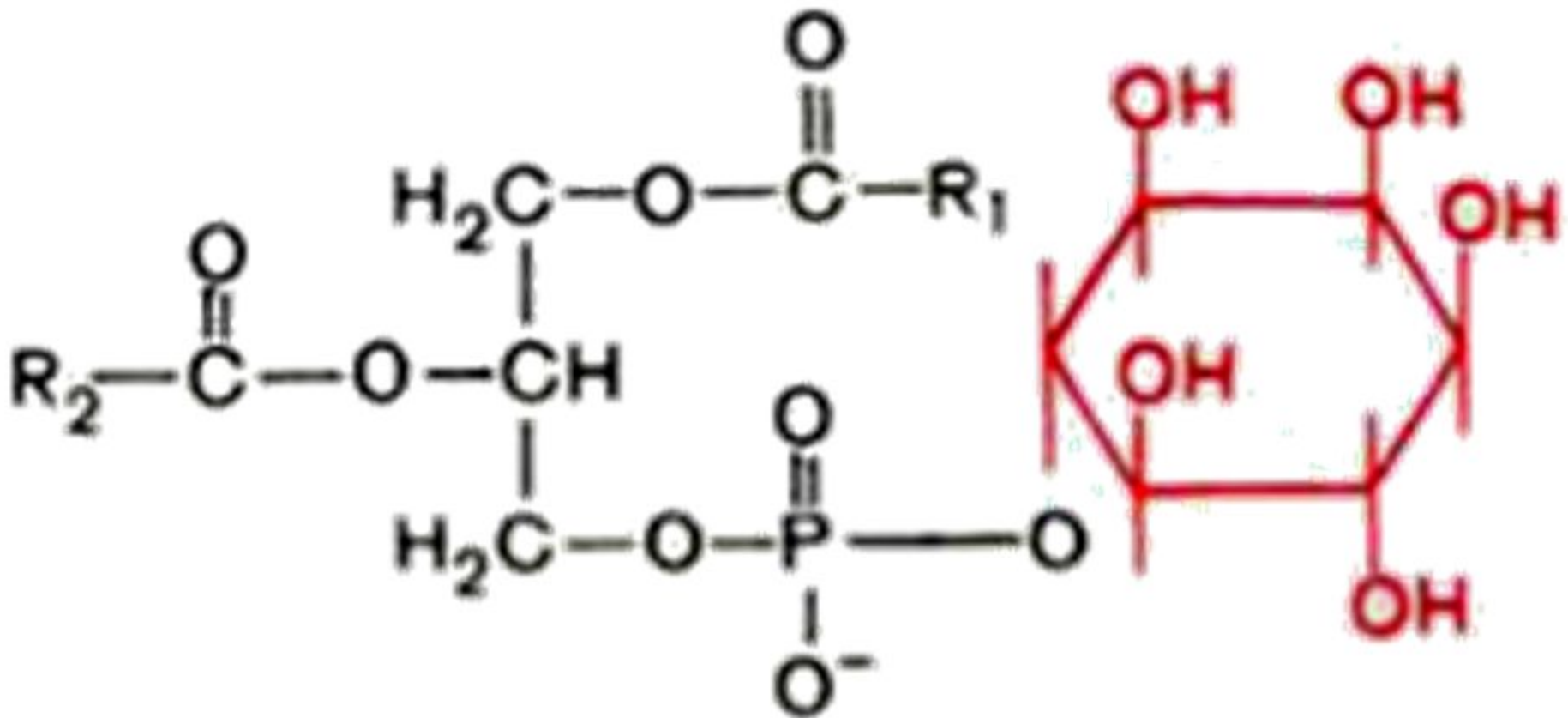
Phospholipid phosphatidylcholine



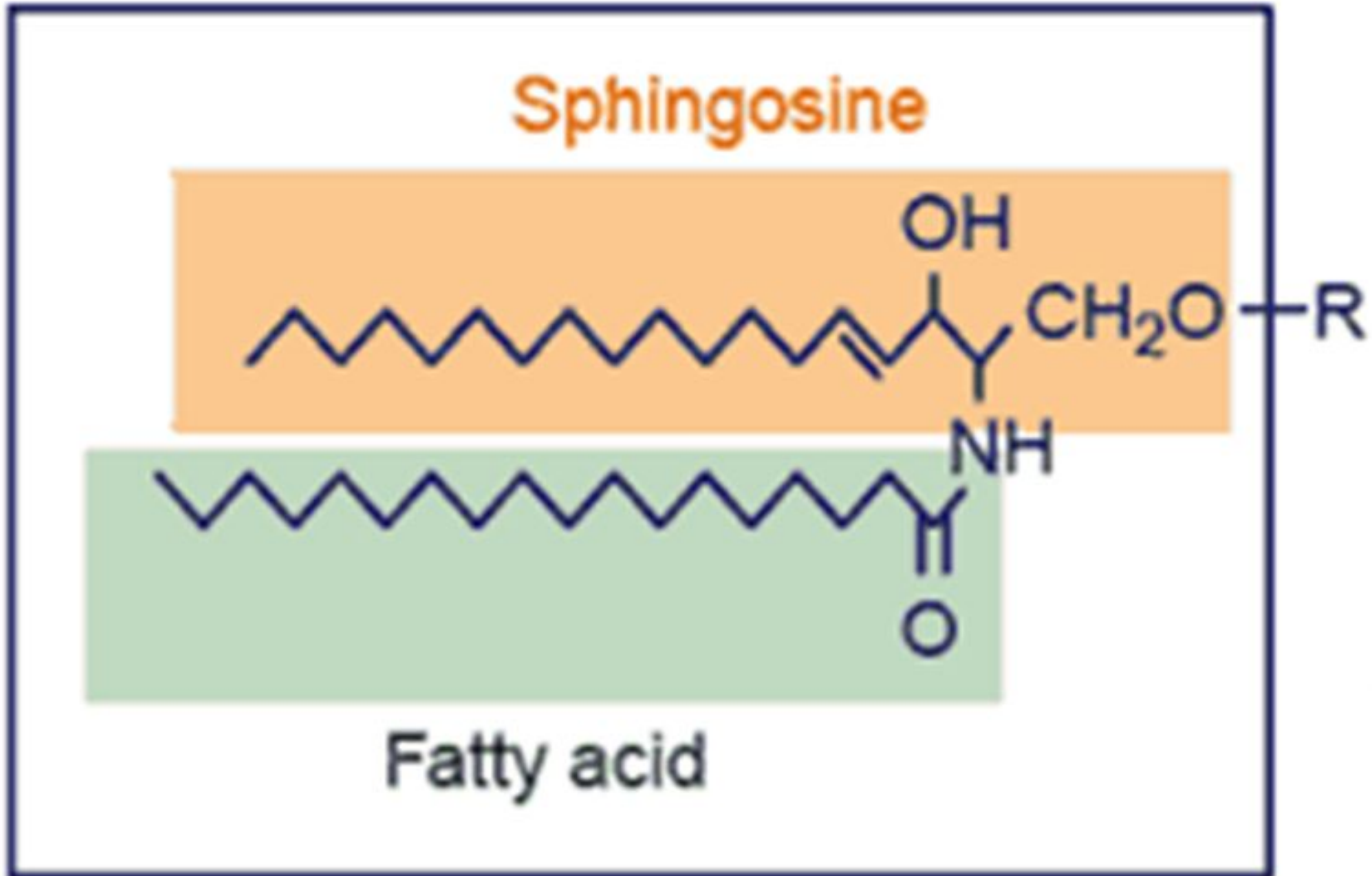
Phospholipid phosphatidylethanolamine



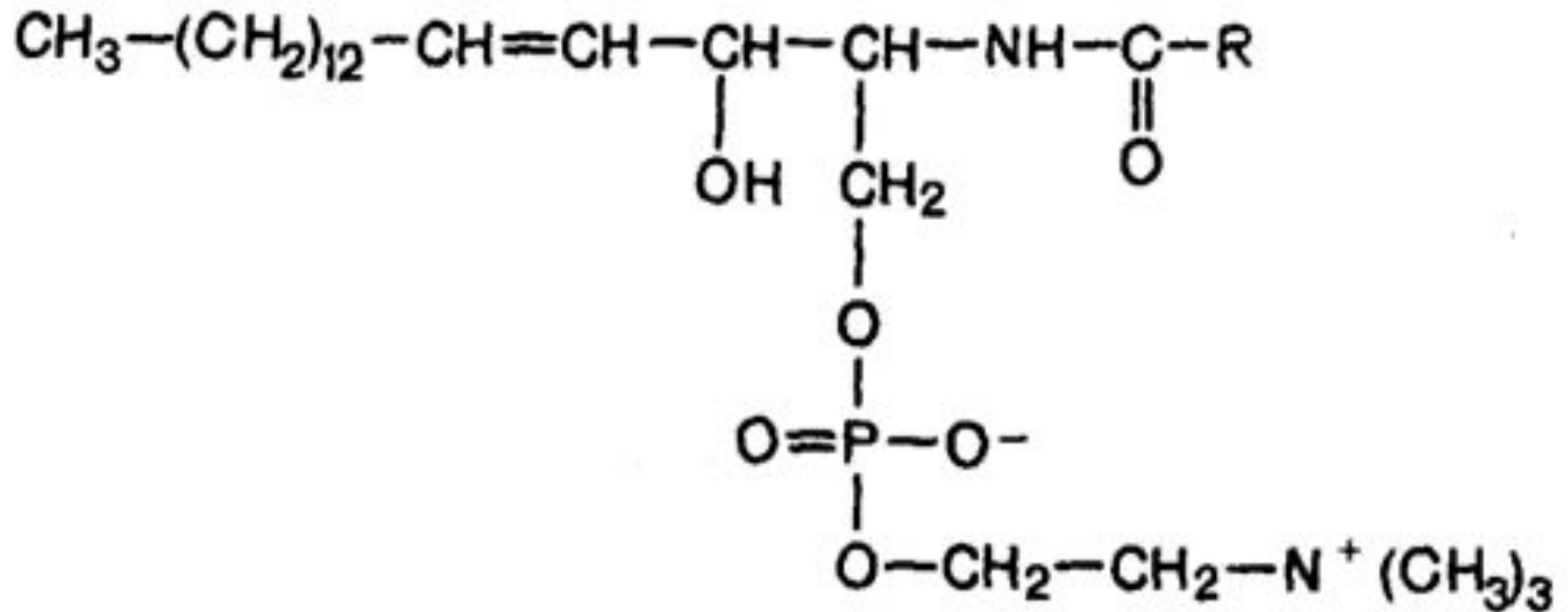
Phospholipid phosphatidylinositol



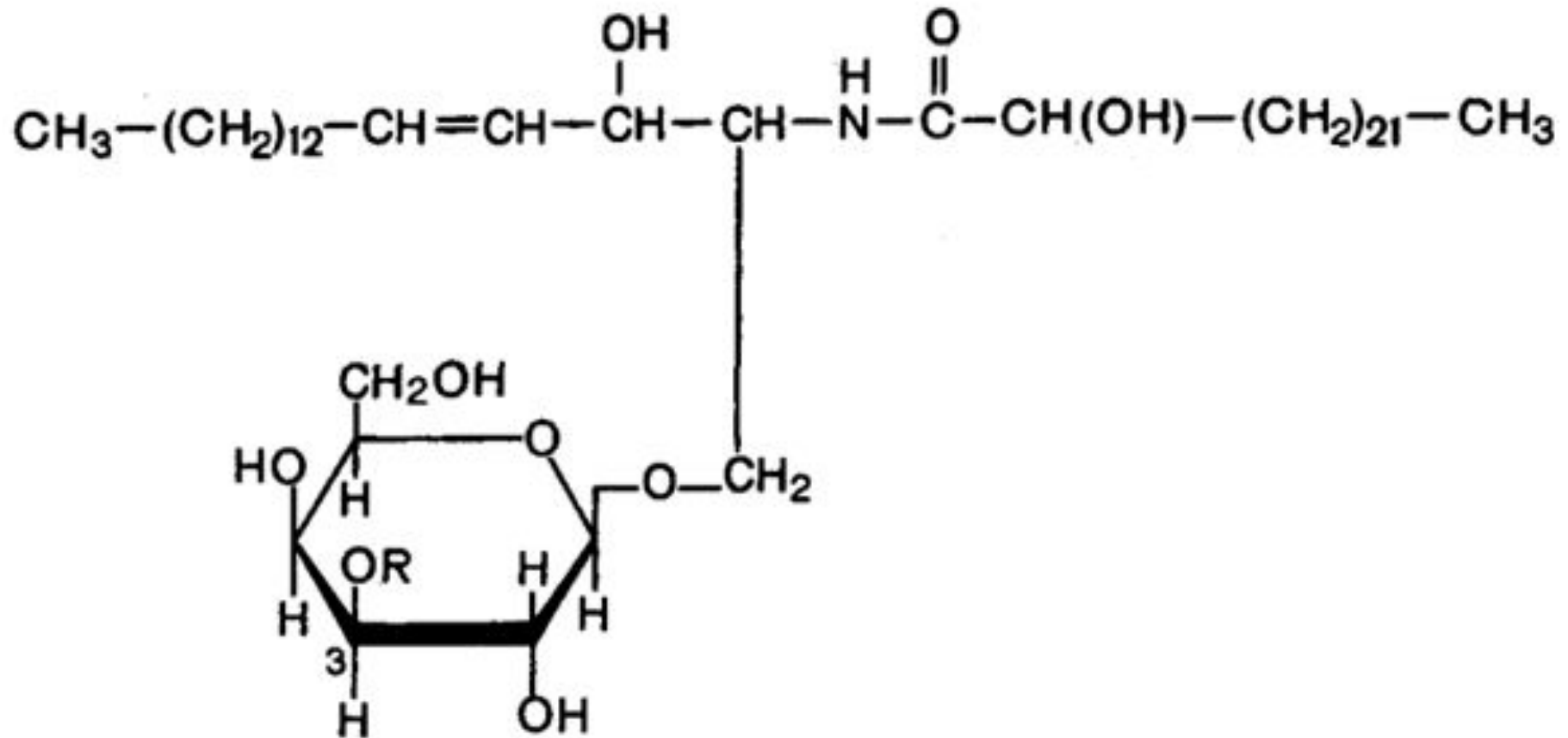
Sphingolipid ceramide



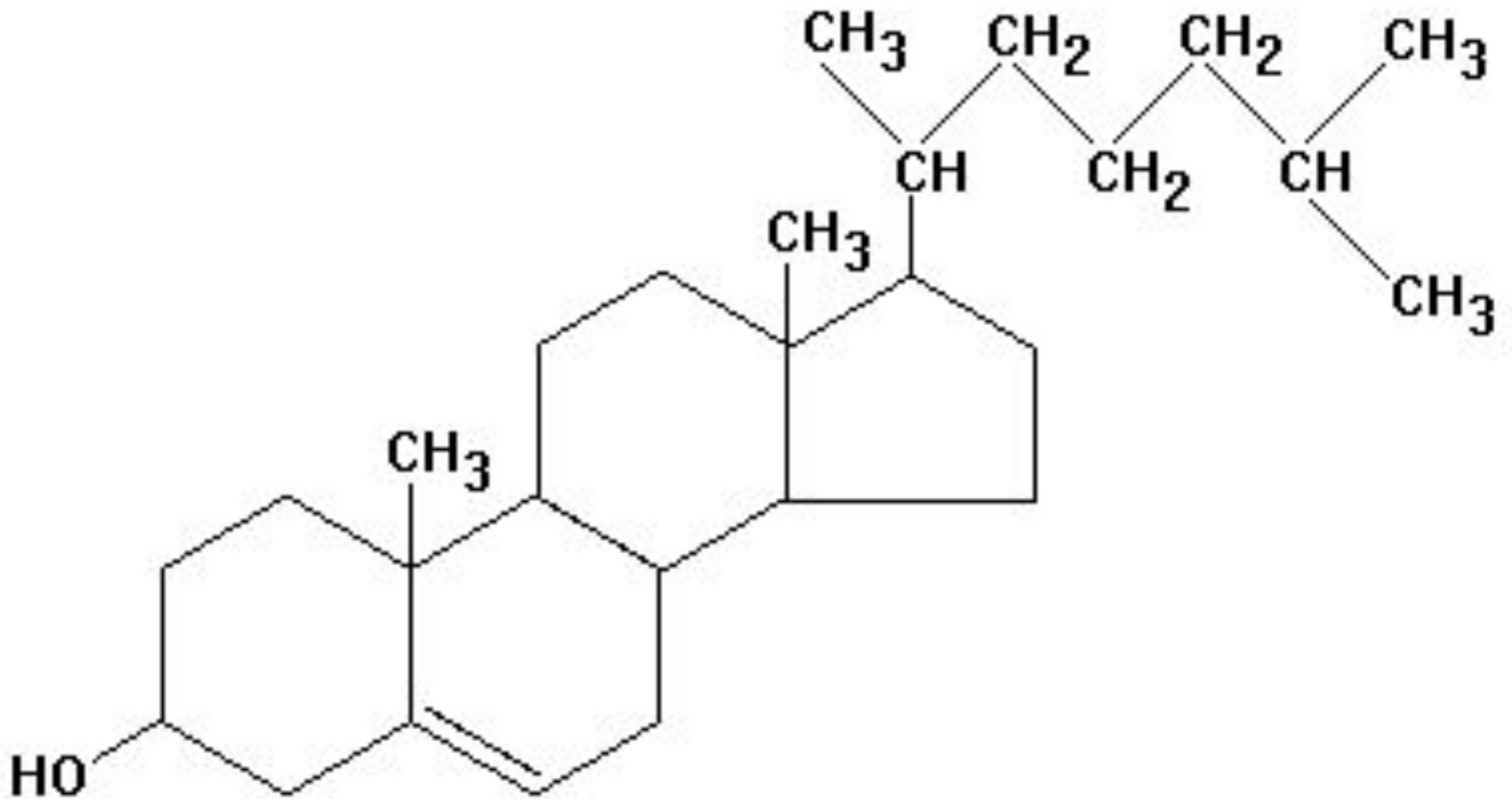
Sphingophospholipid sphingomyelin



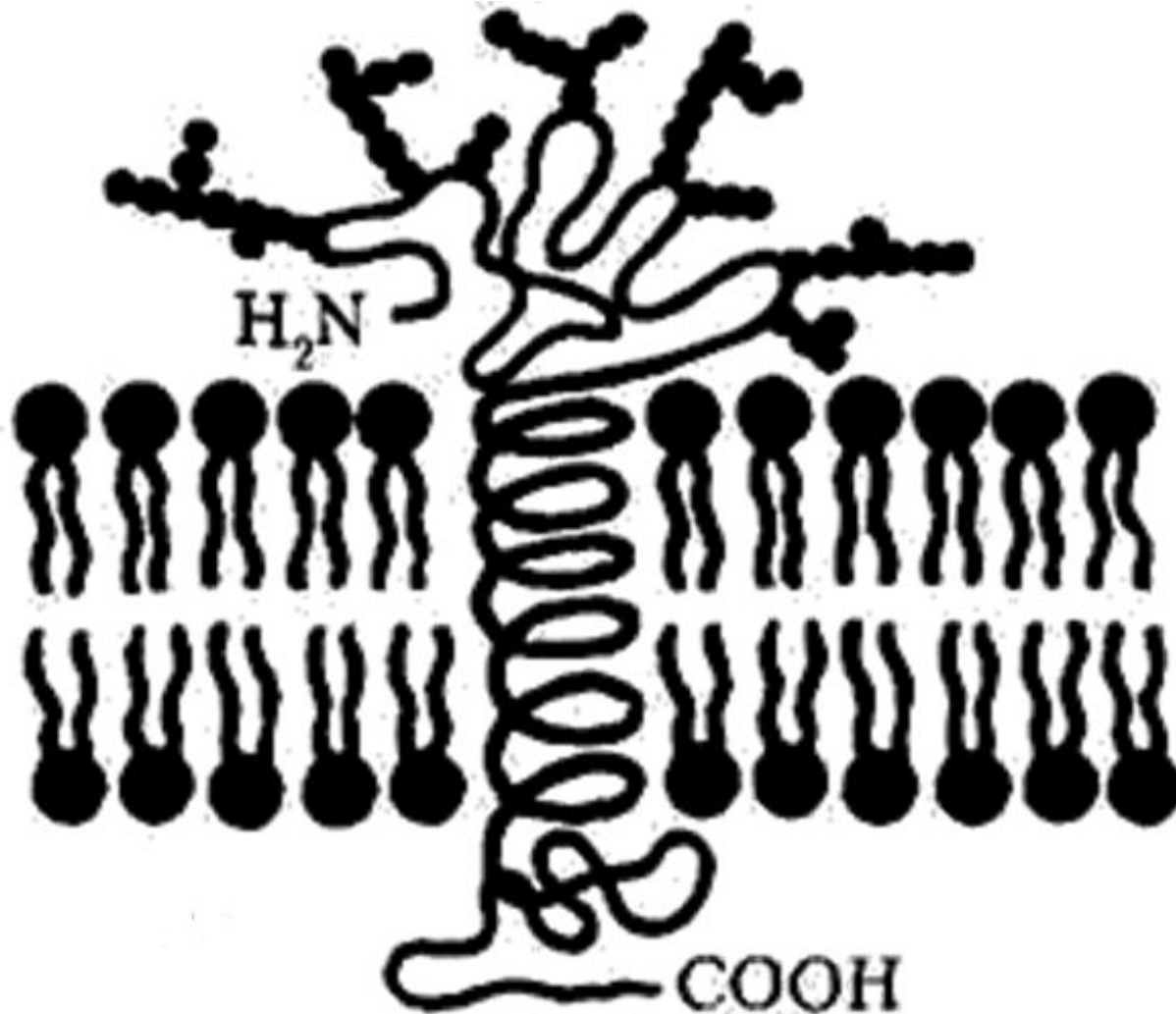
Glycolipid galactosyl ceramide



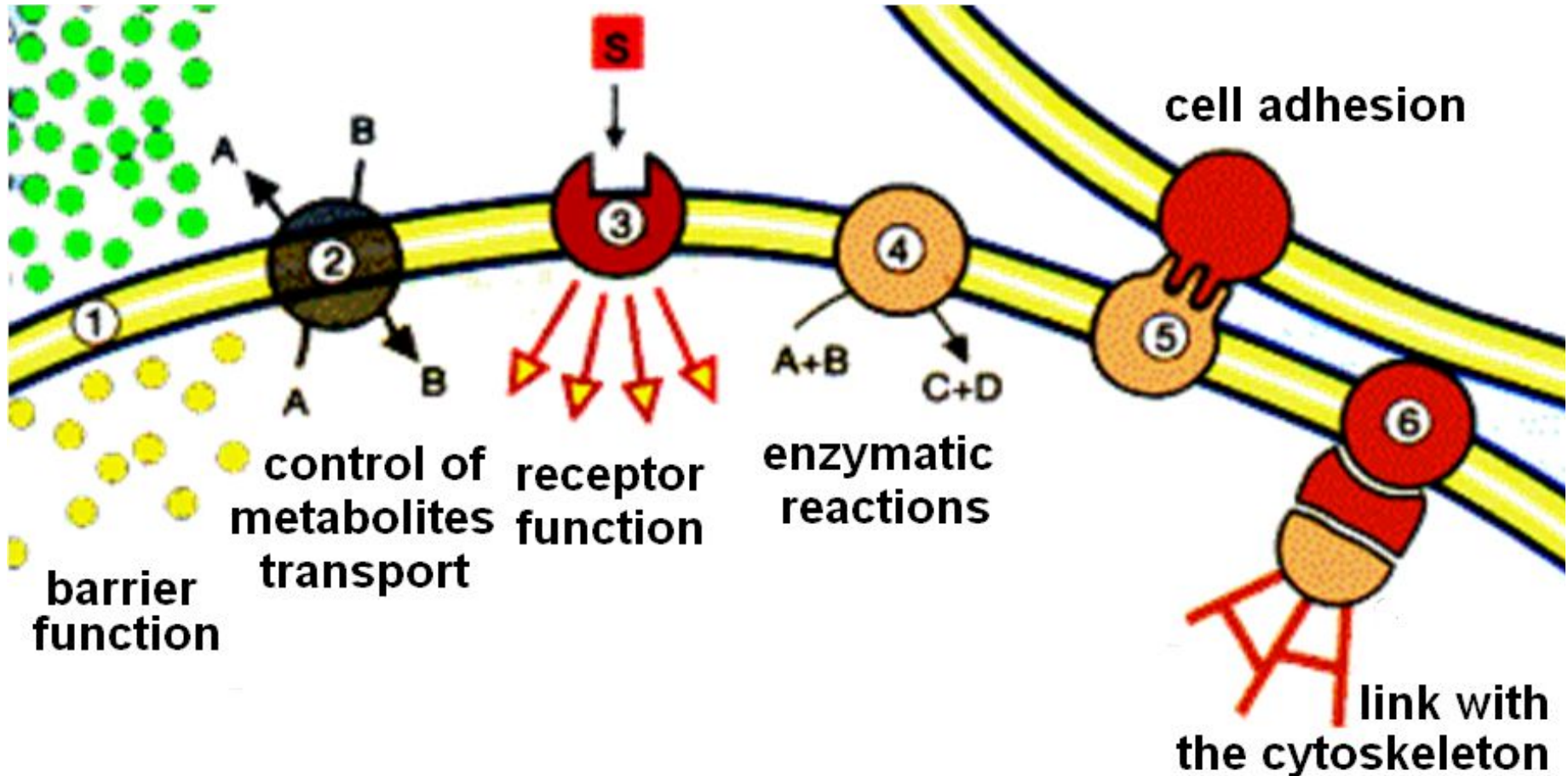
Cholesterol



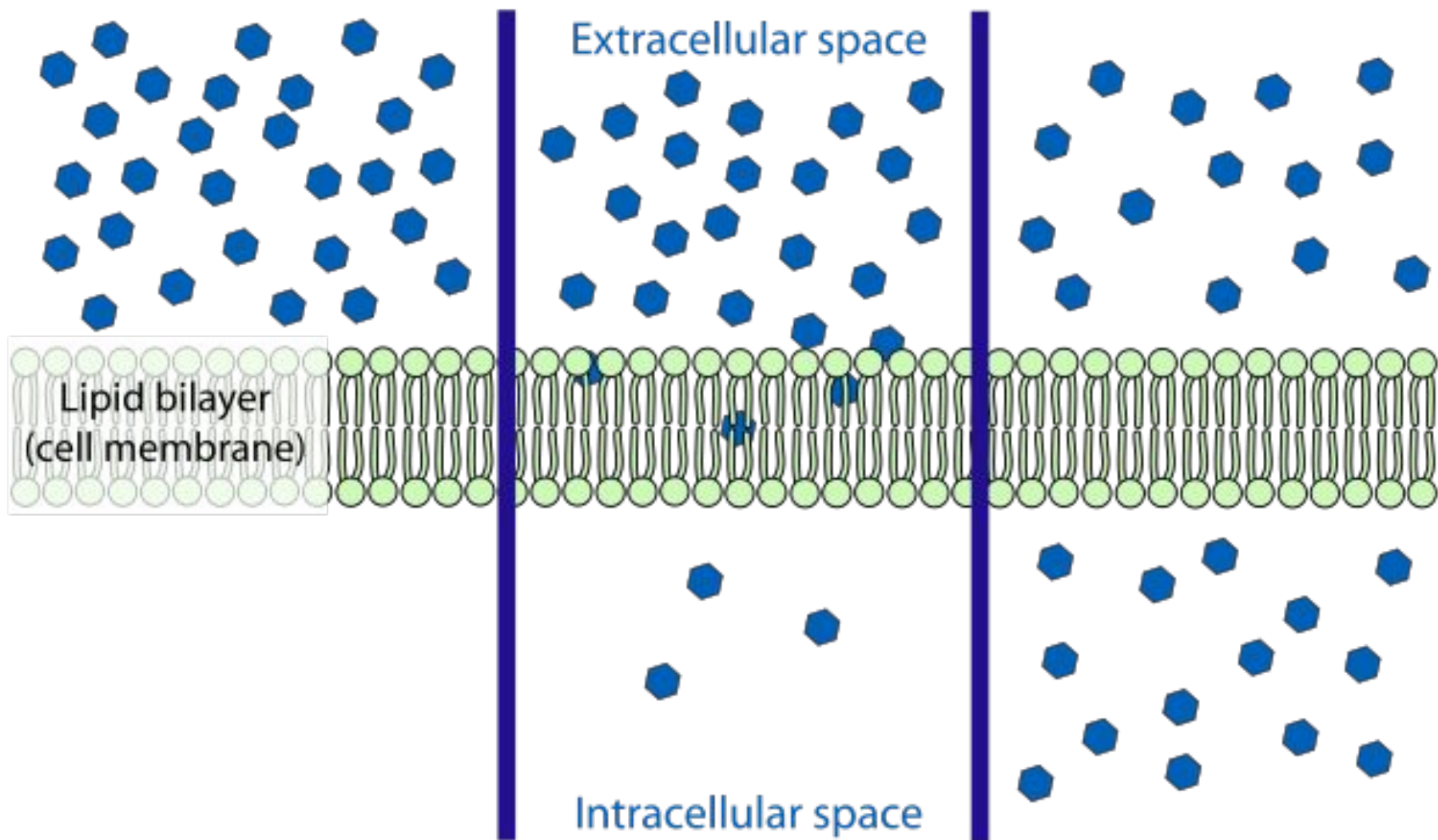
Integral protein-receptor (glycoprotein)



Functions of biological membranes



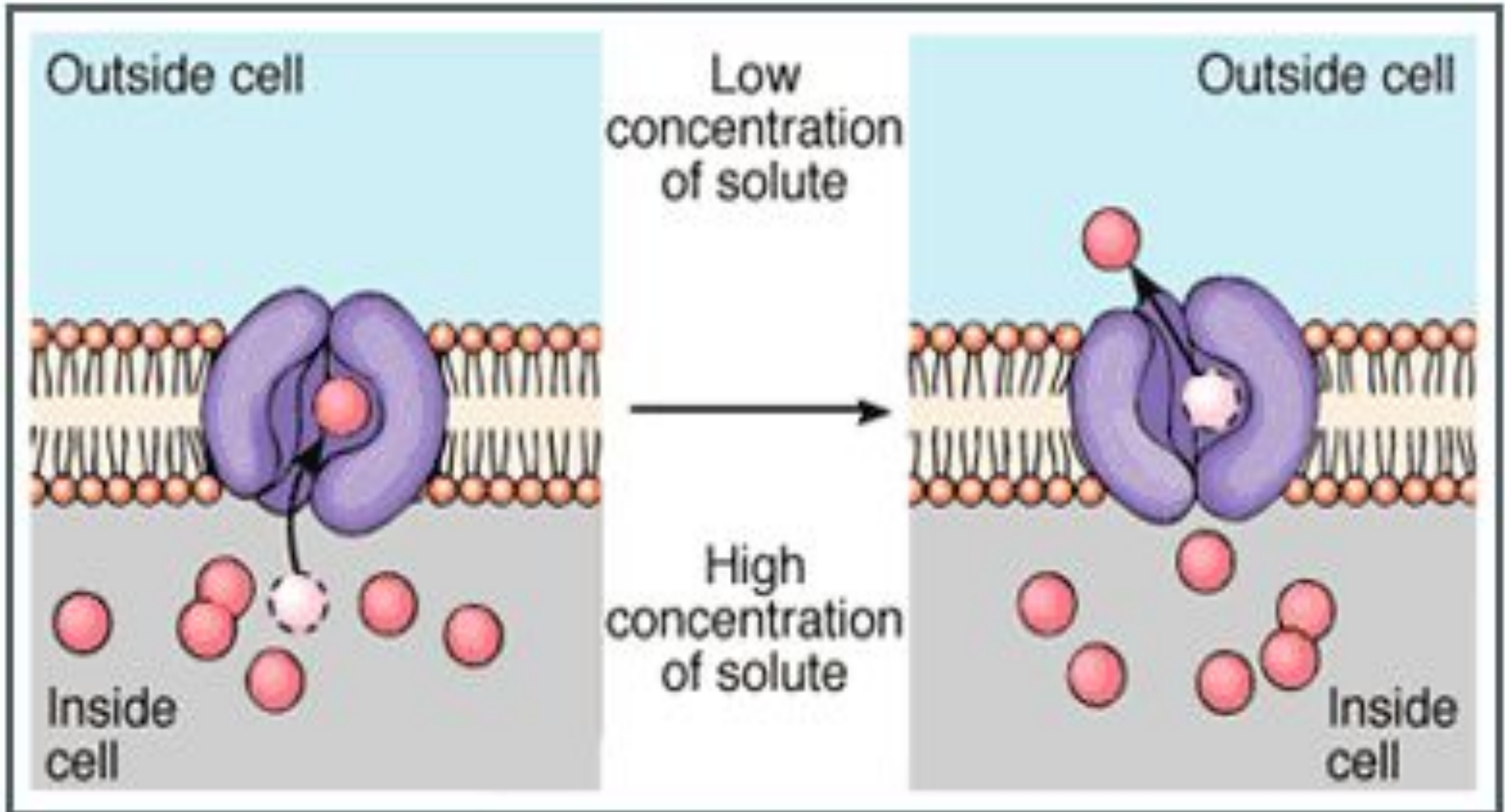
Simple diffusion



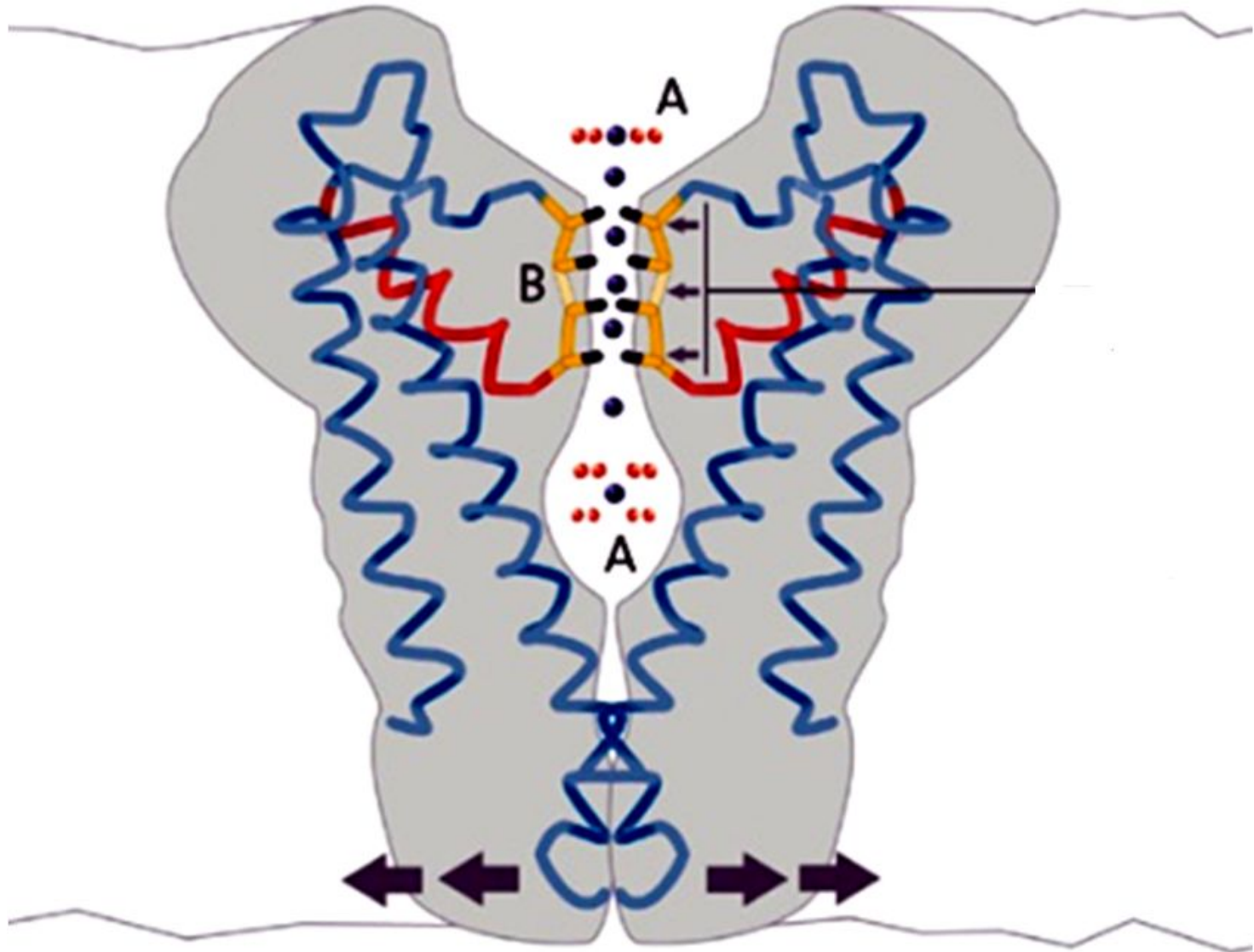
TIME

Facilitated diffusion

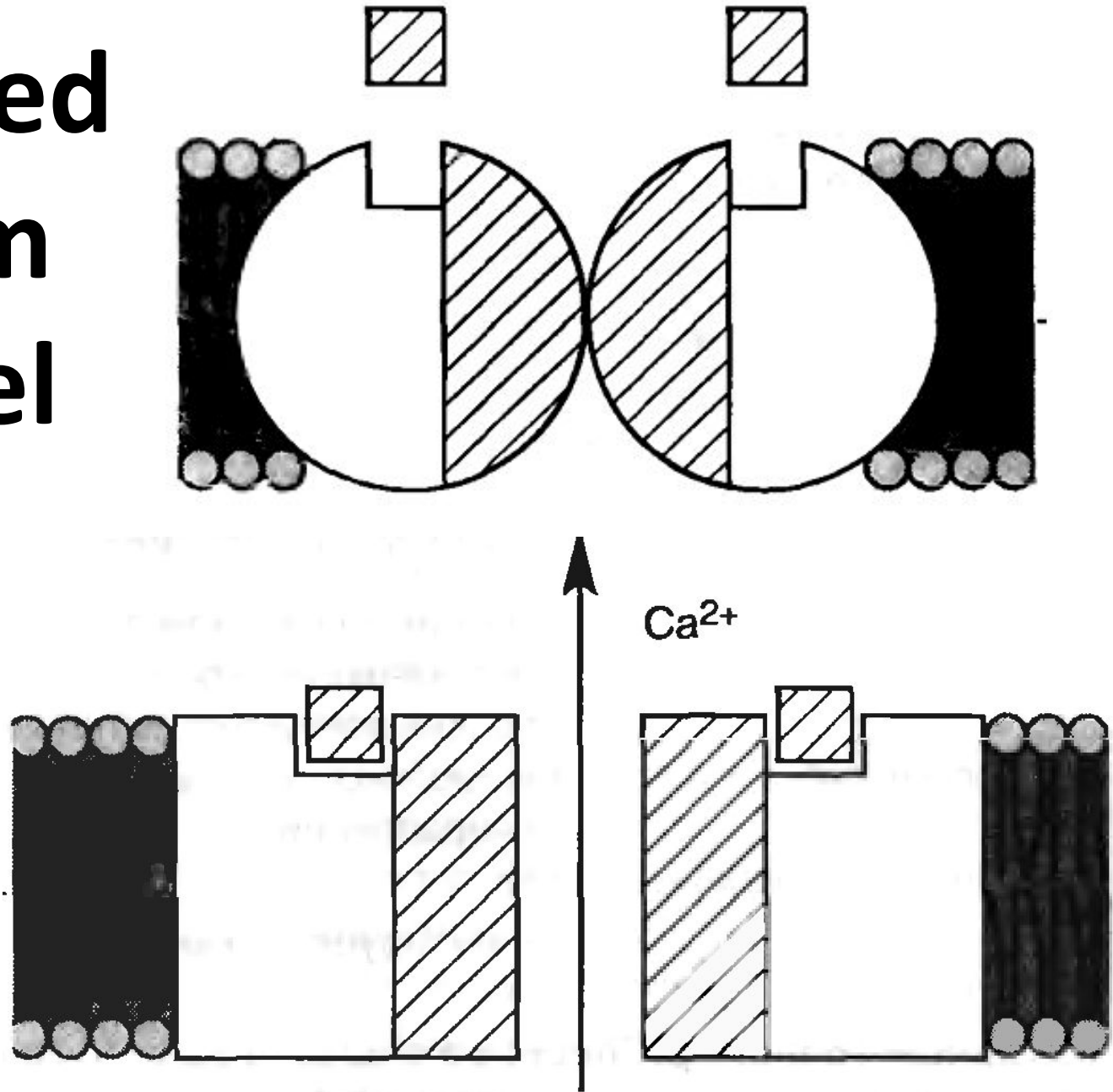
Facilitated diffusion



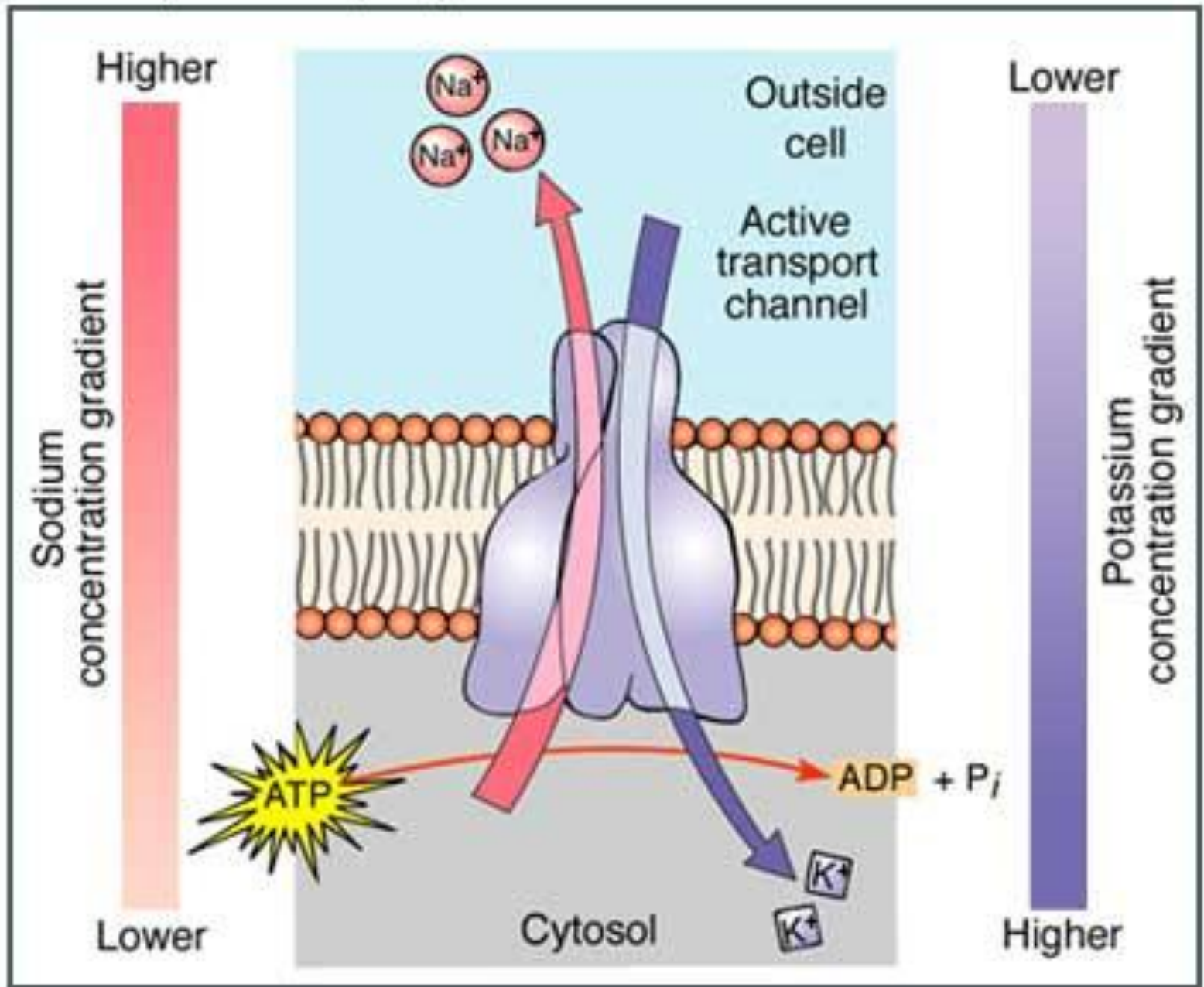
Ion channels

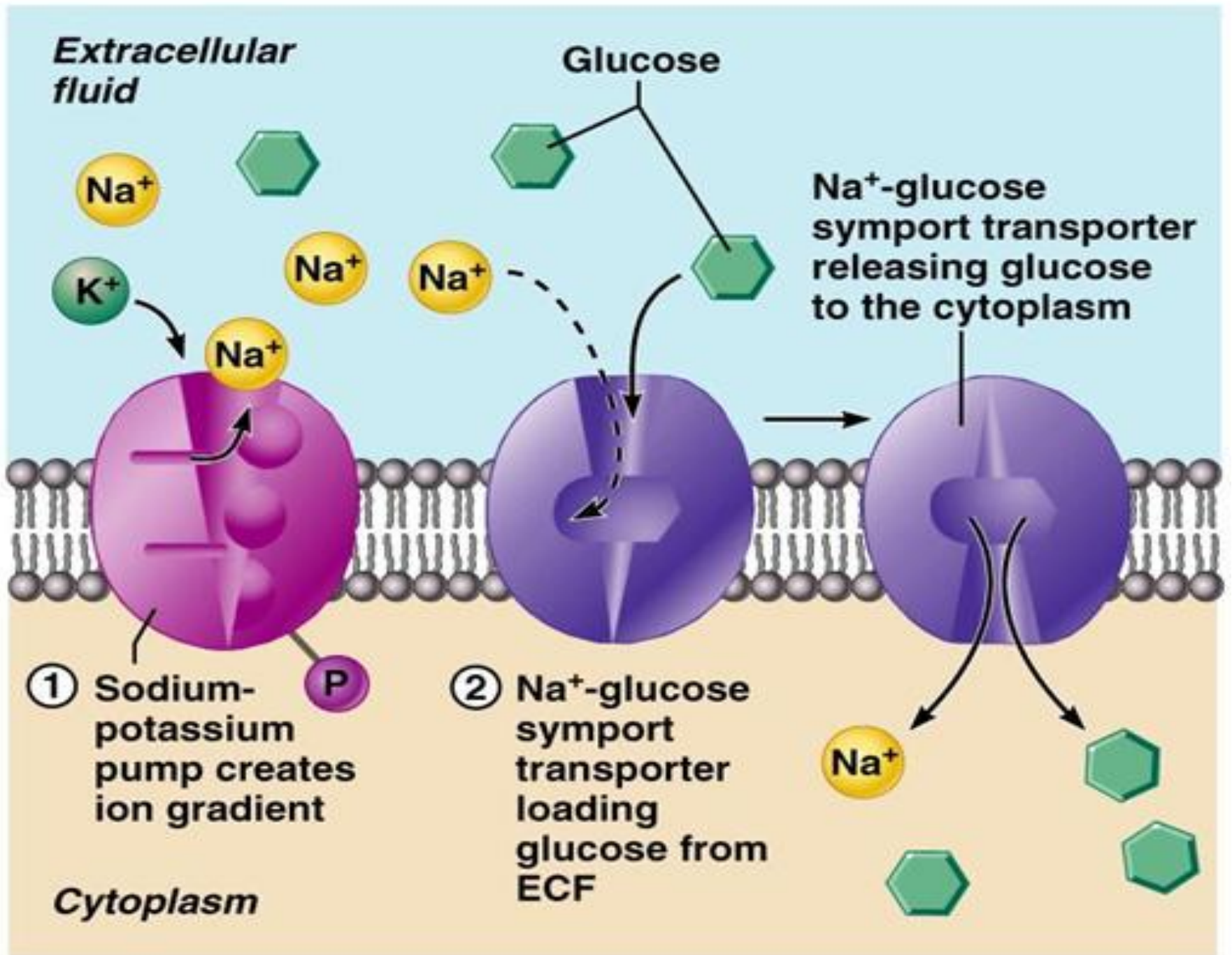


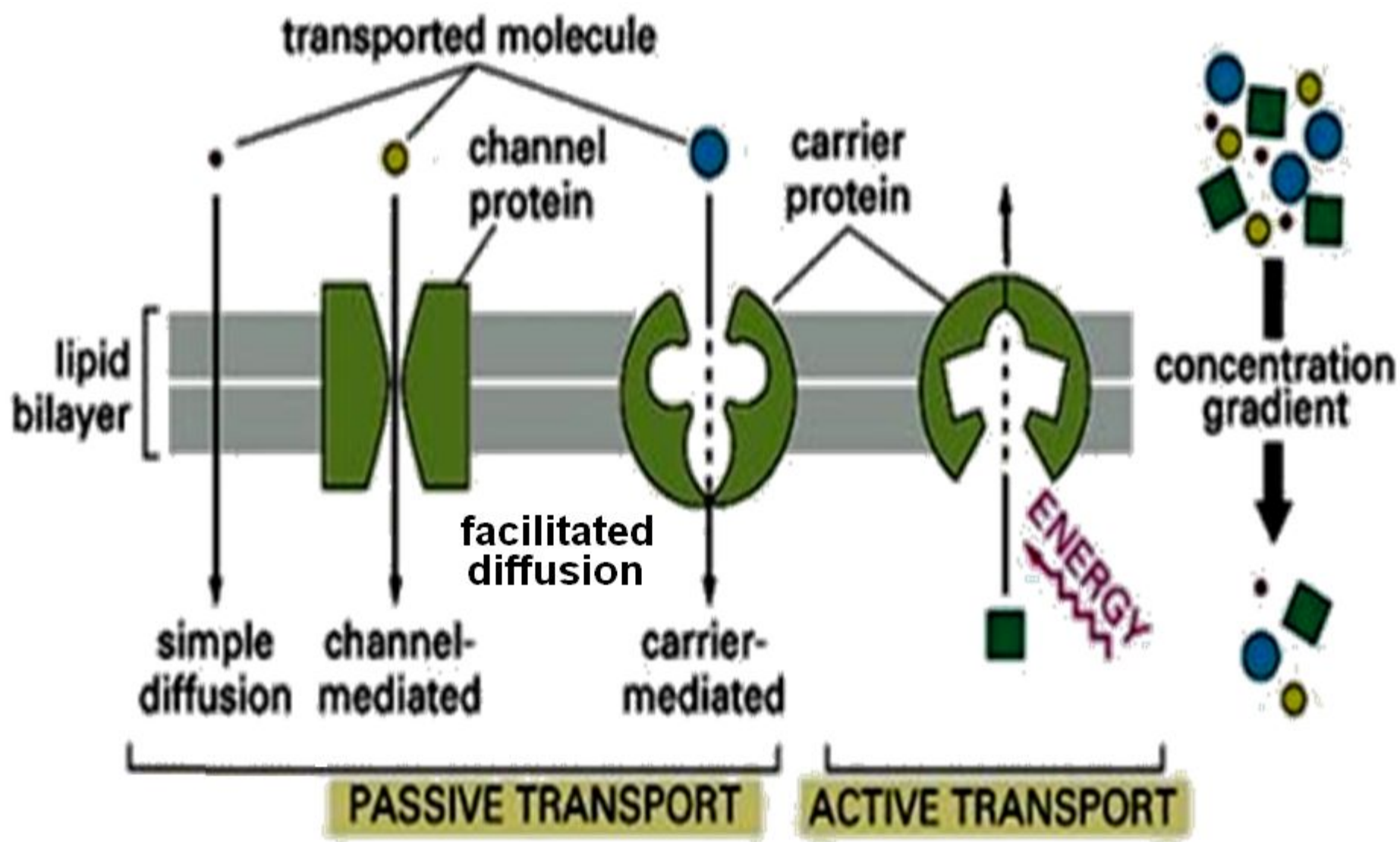
Regulated calcium channel



Sodium-potassium pump

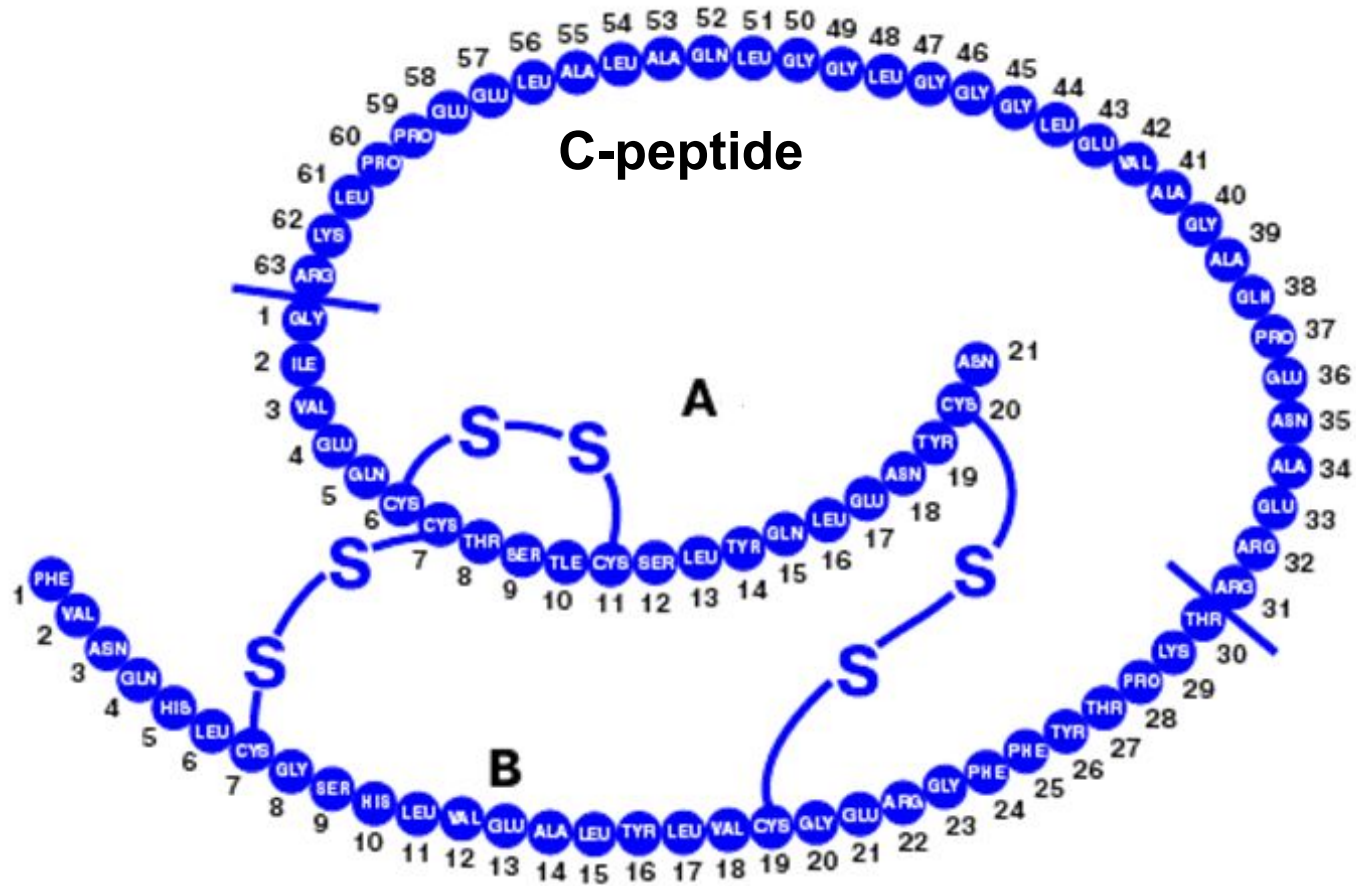






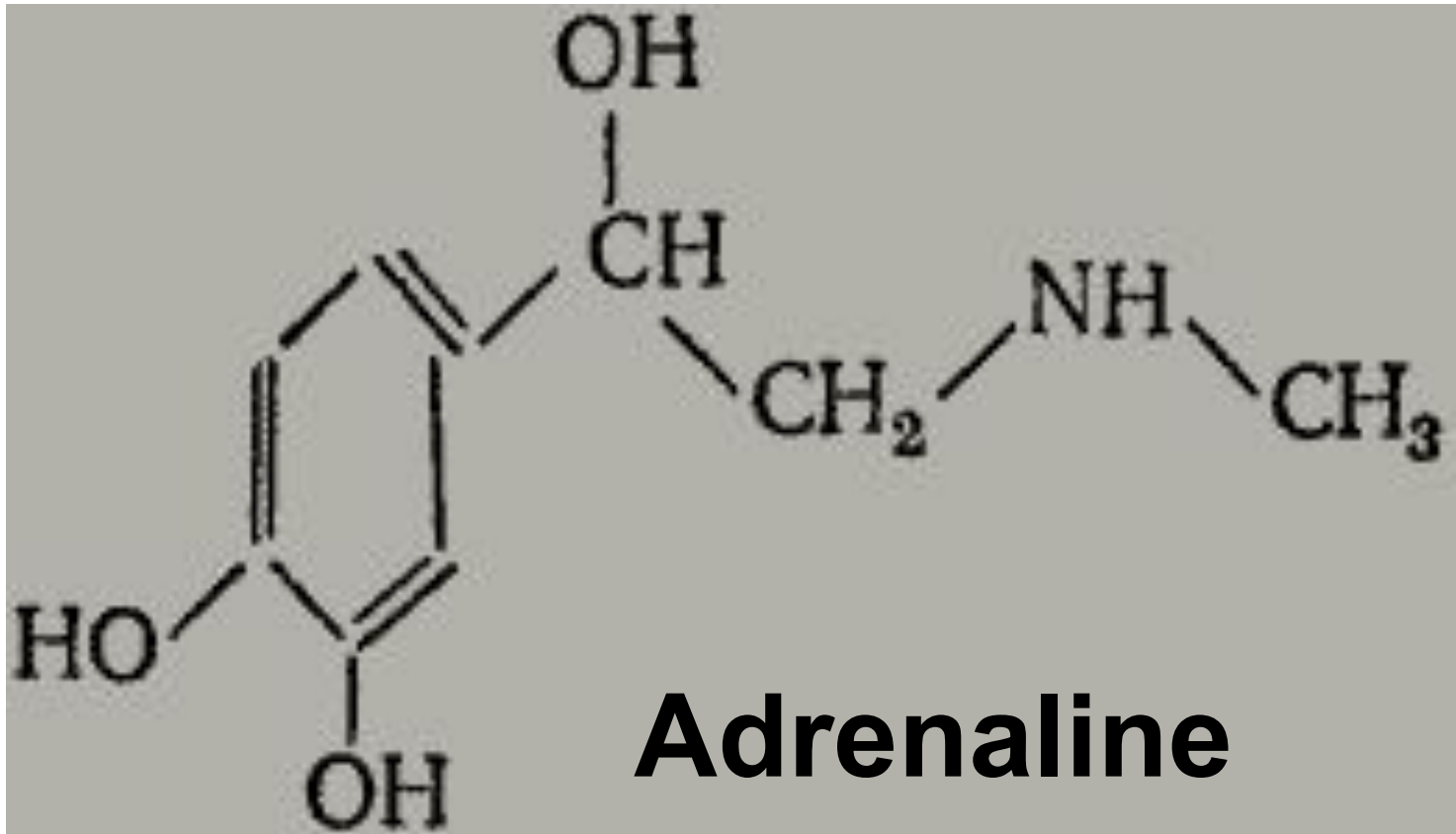
The Mechanism of Hormonal Signal Transmission

Peptide and protein hormones

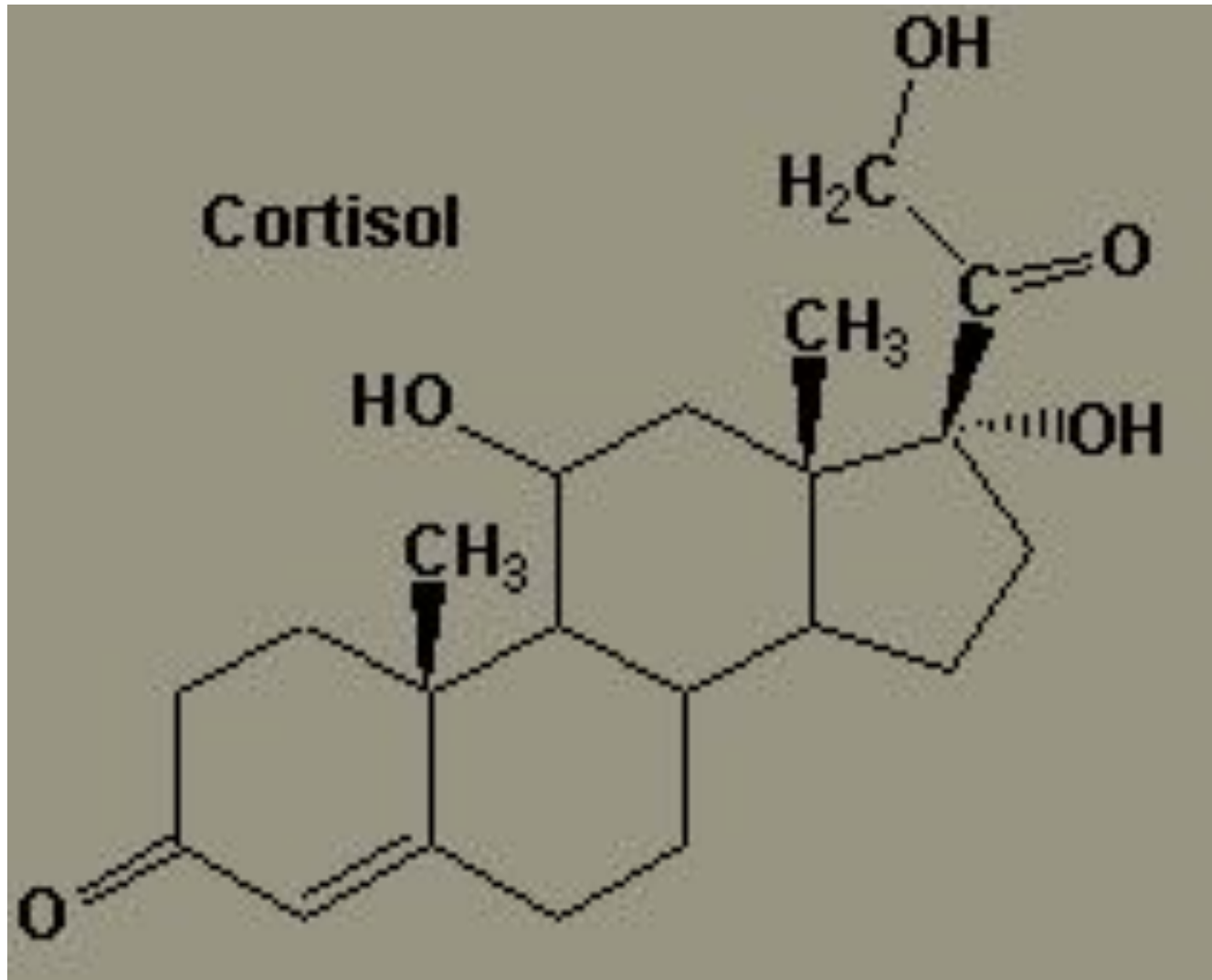


Insulin

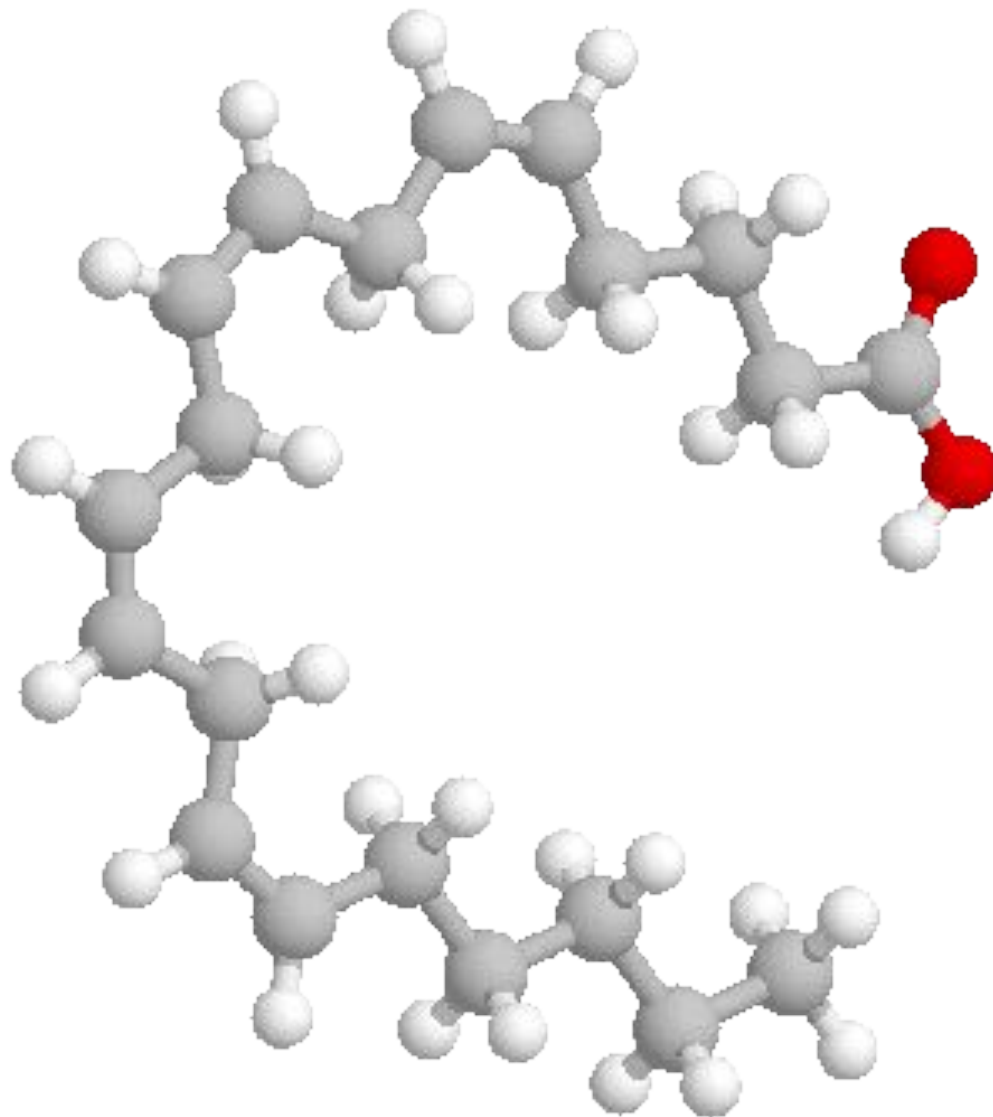
Hormones - amino acid derivatives



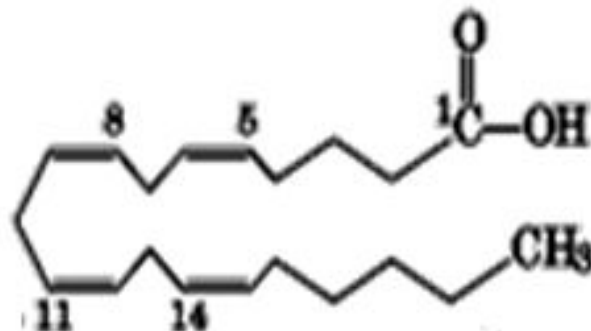
Steroid hormones



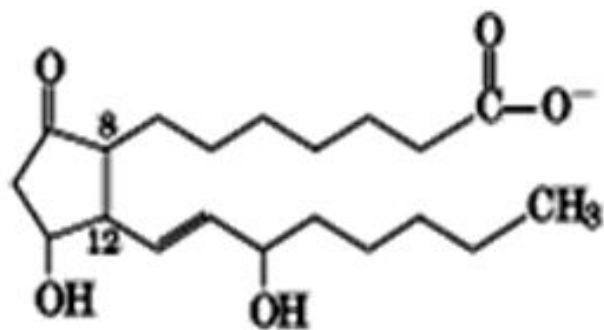
Arachidonic acid



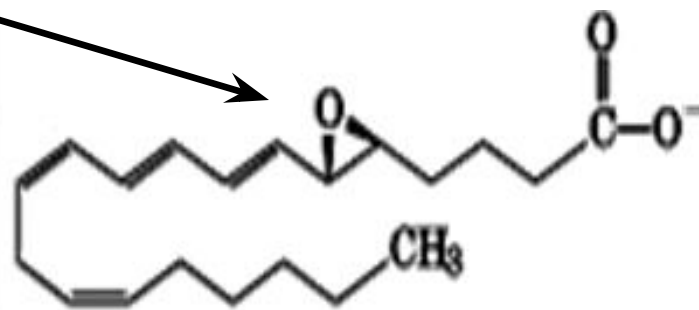
Eicosanoids



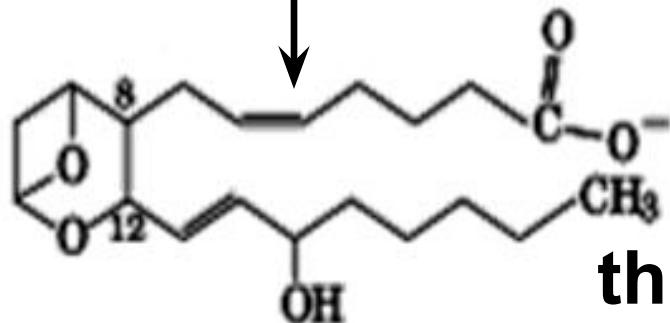
**arachidonic
acid**



prostaglandins

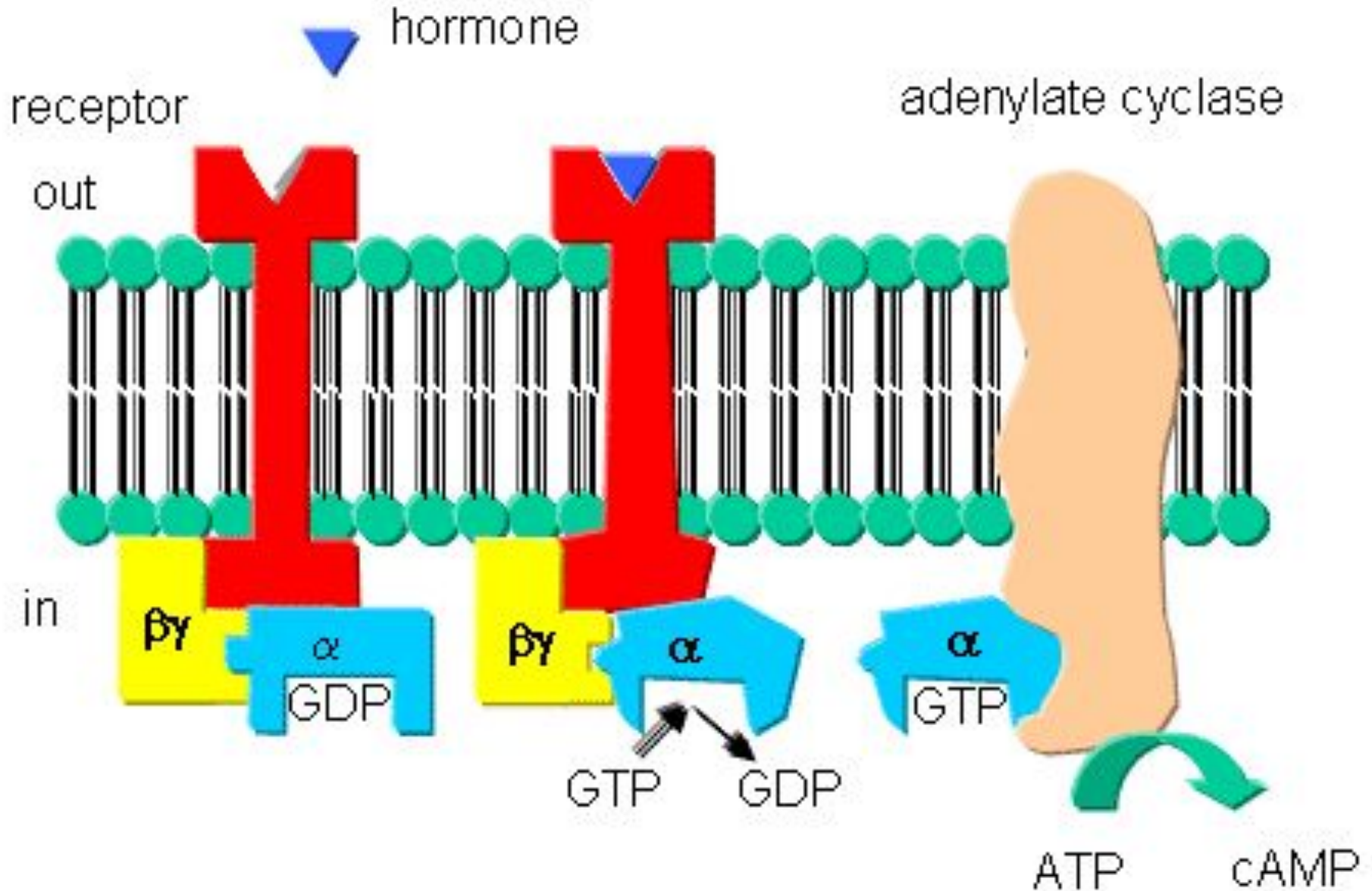


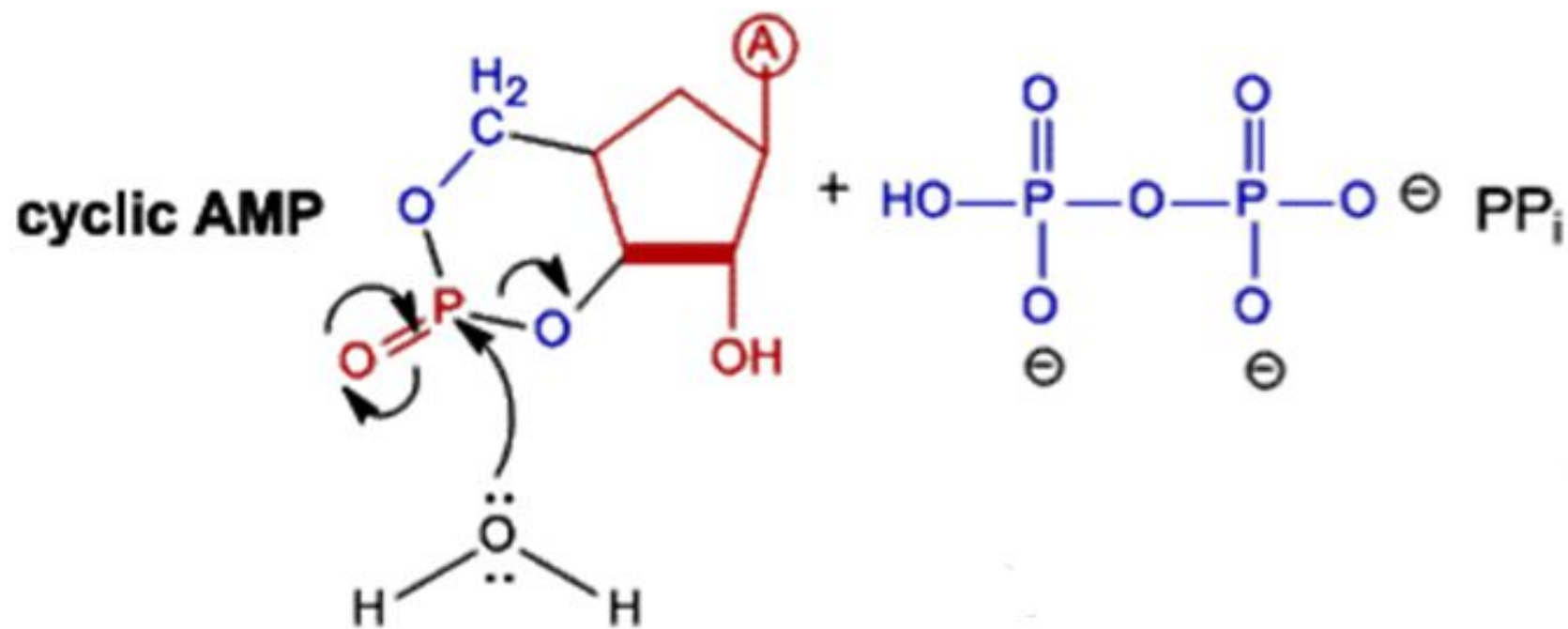
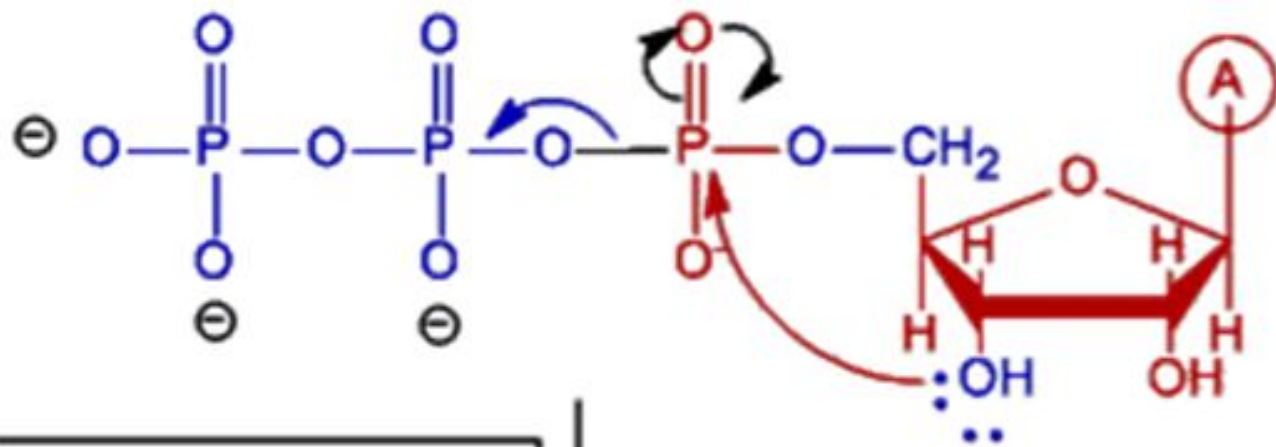
leukotrienes



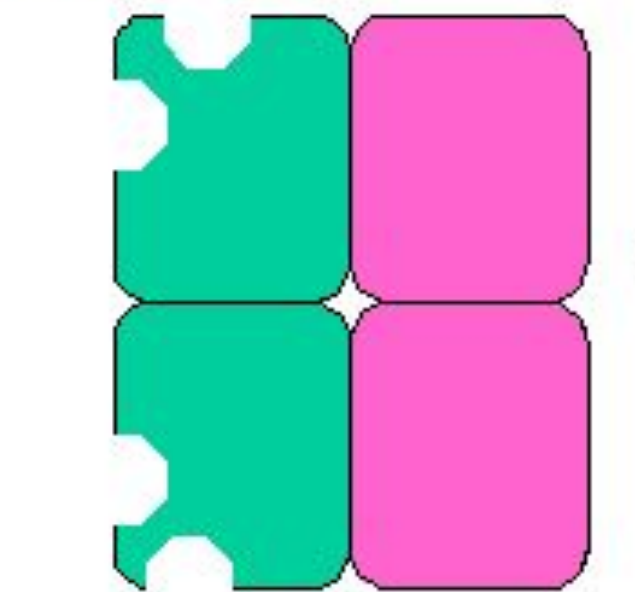
thromboxanes

Adenylate cyclase messenger system





**inactive
protein kinase A**

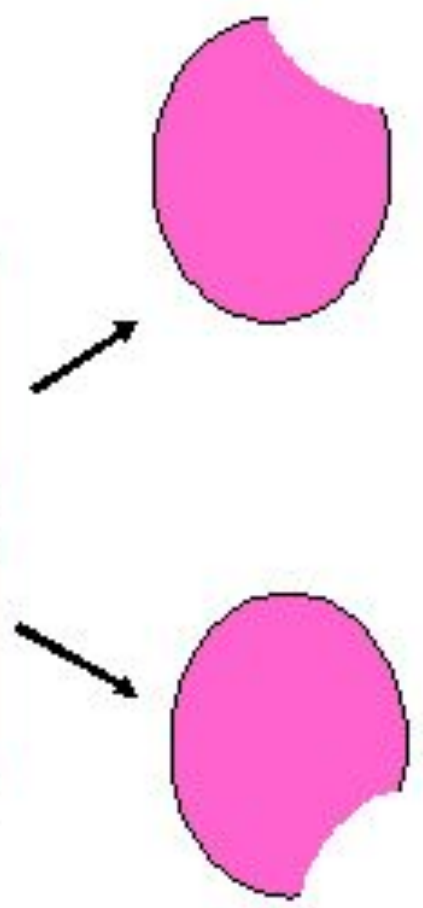
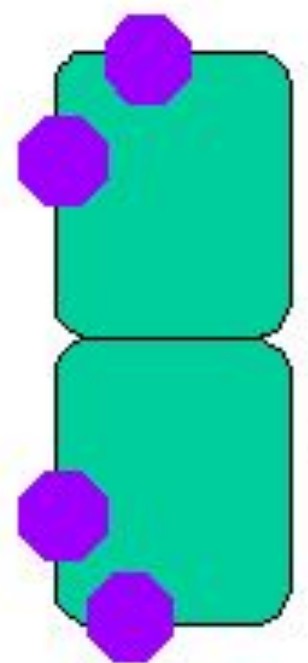


**regulatory
subunits**

**inactive
catalytic
subunits**

**cyclic
AMP**

Four purple octagons are arranged in a cluster, representing cyclic AMP molecules. A black arrow points from this cluster towards the next stage of the diagram.

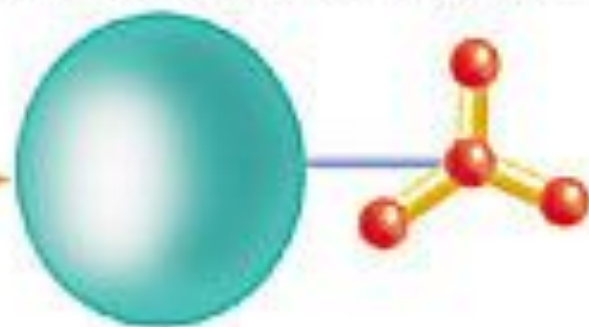


**active
catalytic
subunits**

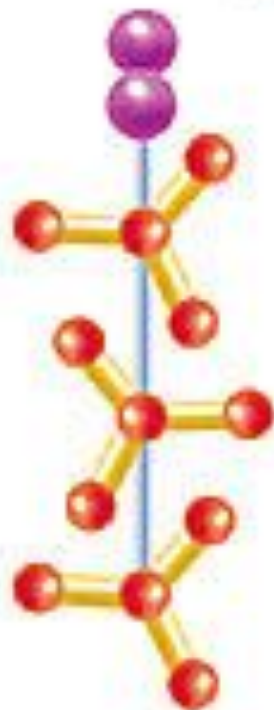
Protein



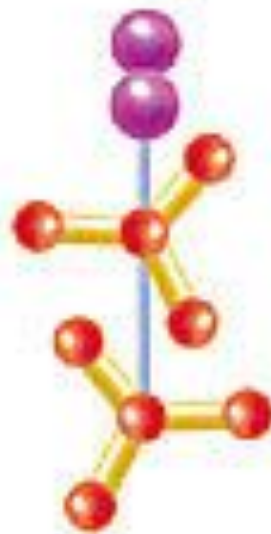
Phosphorylated Protein



Protein Kinase

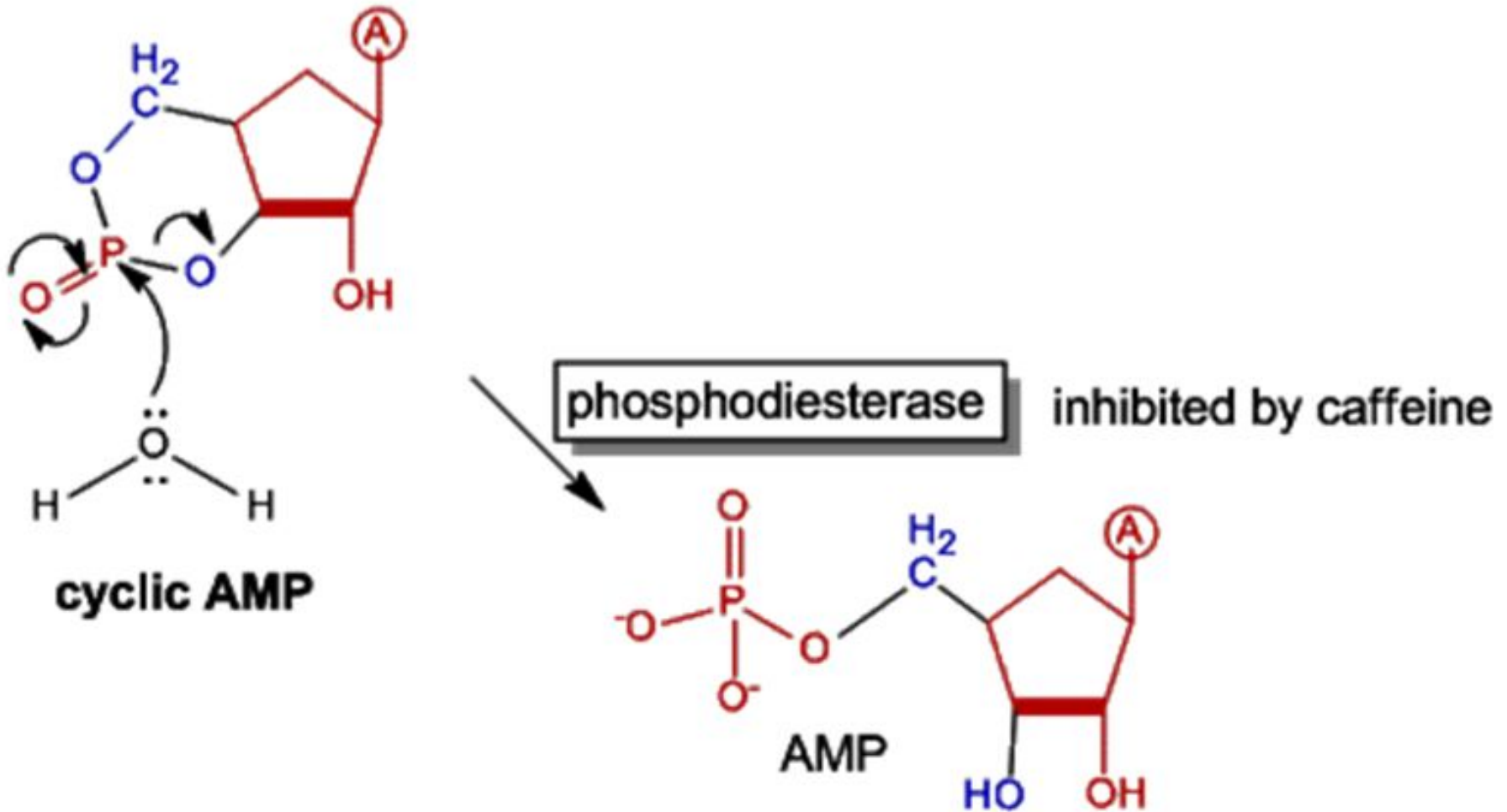


ATP

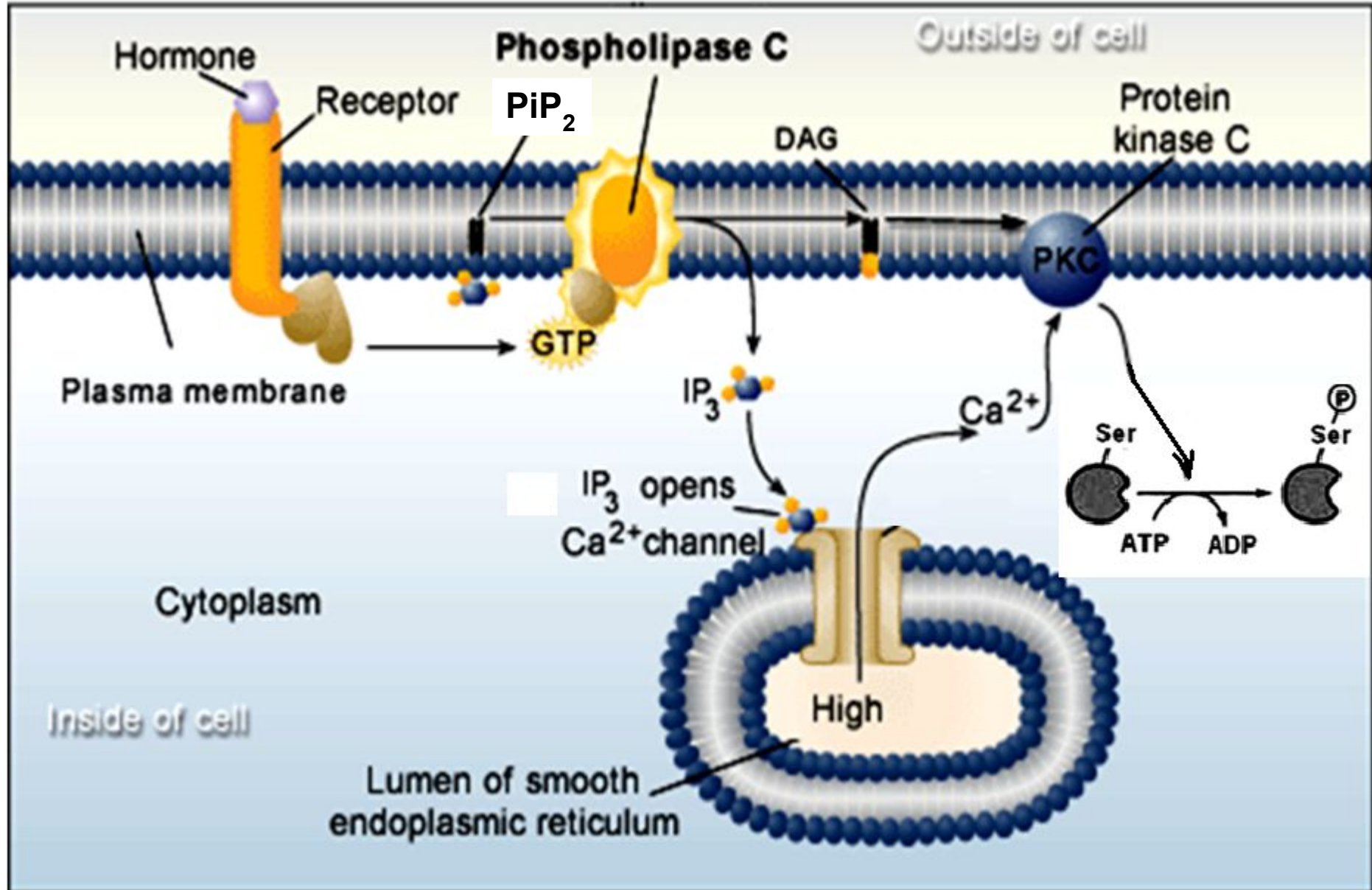


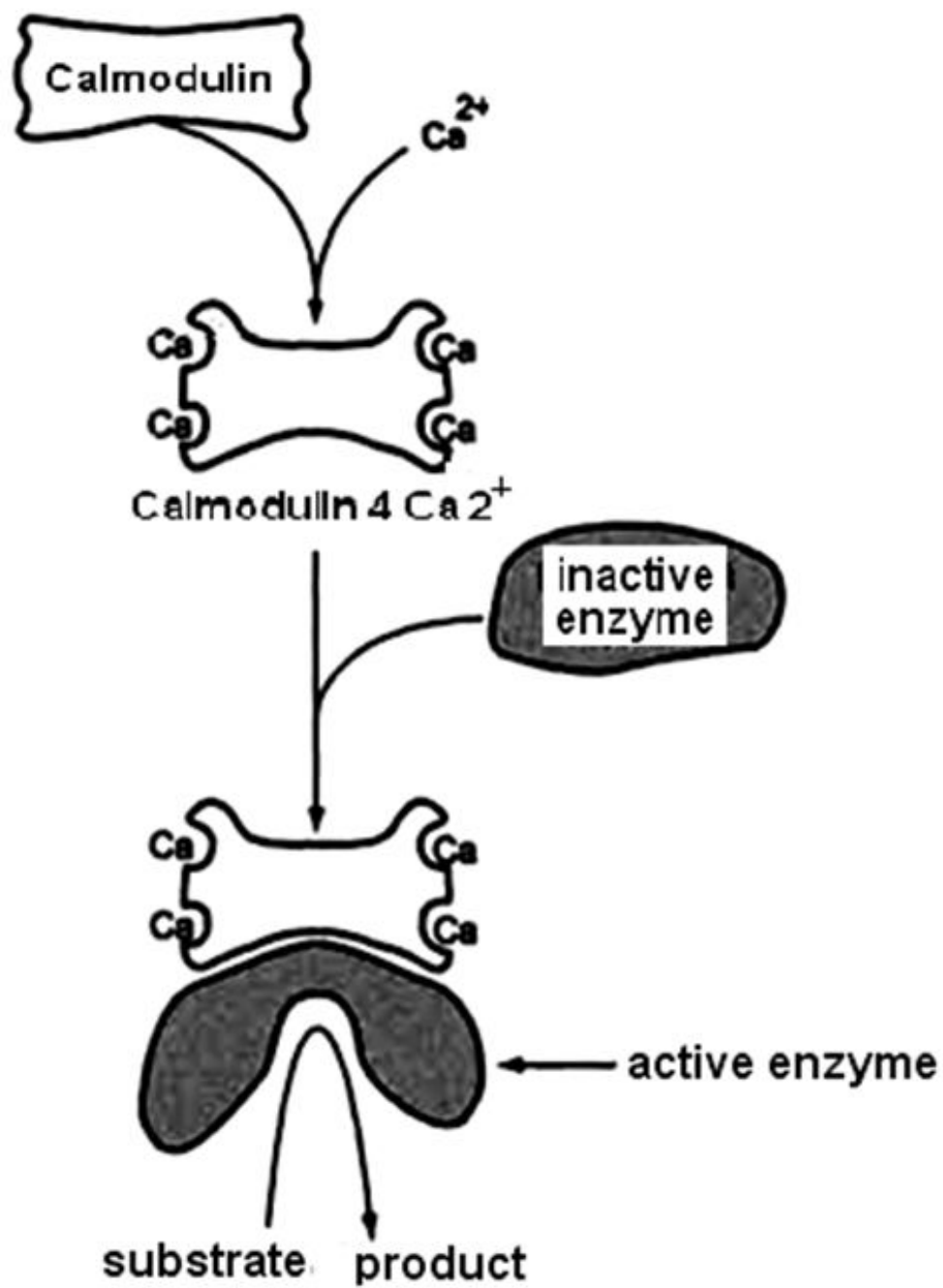
ADP

Termination of signal

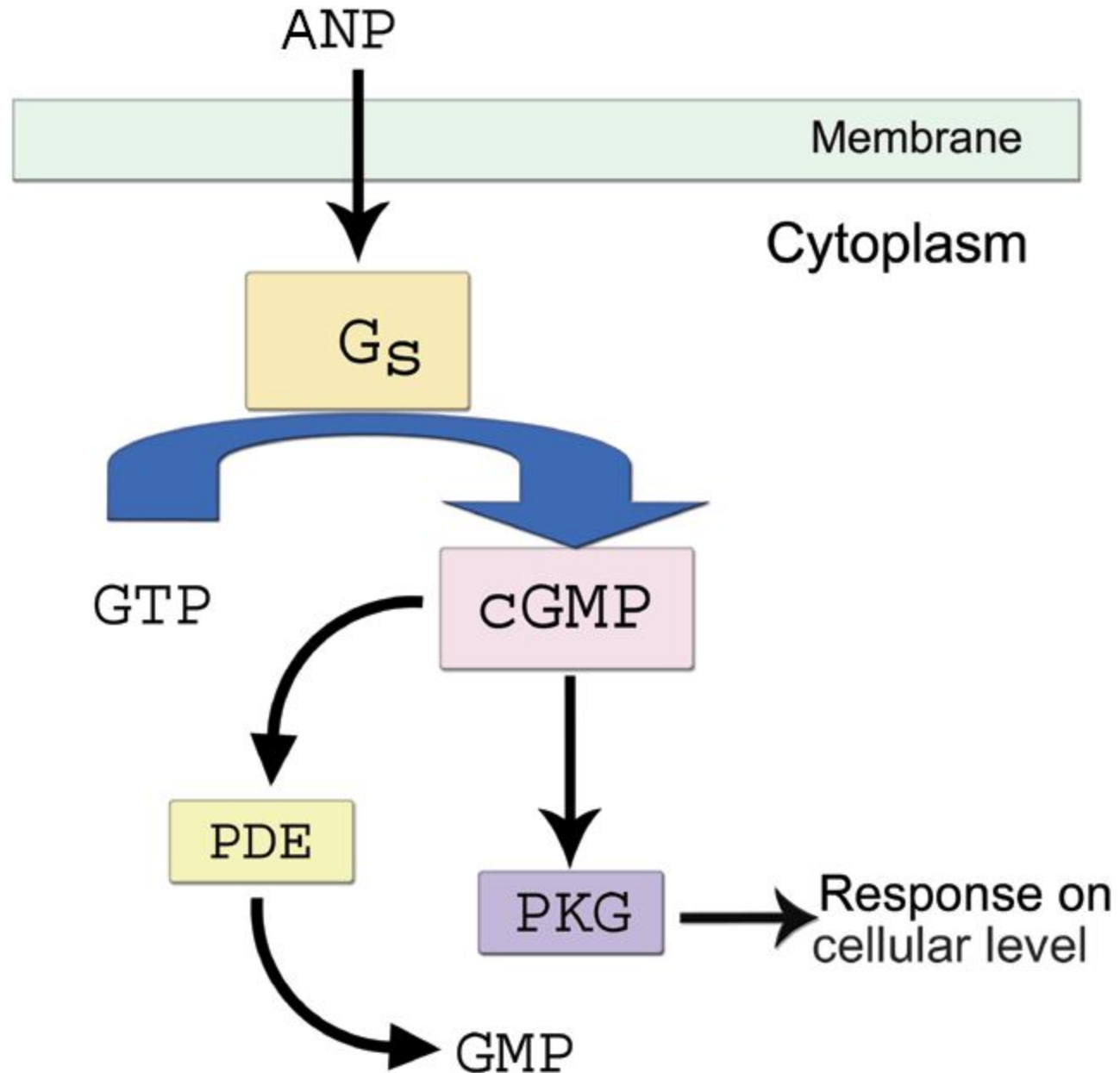


Phosphatidyl inositol calcium system

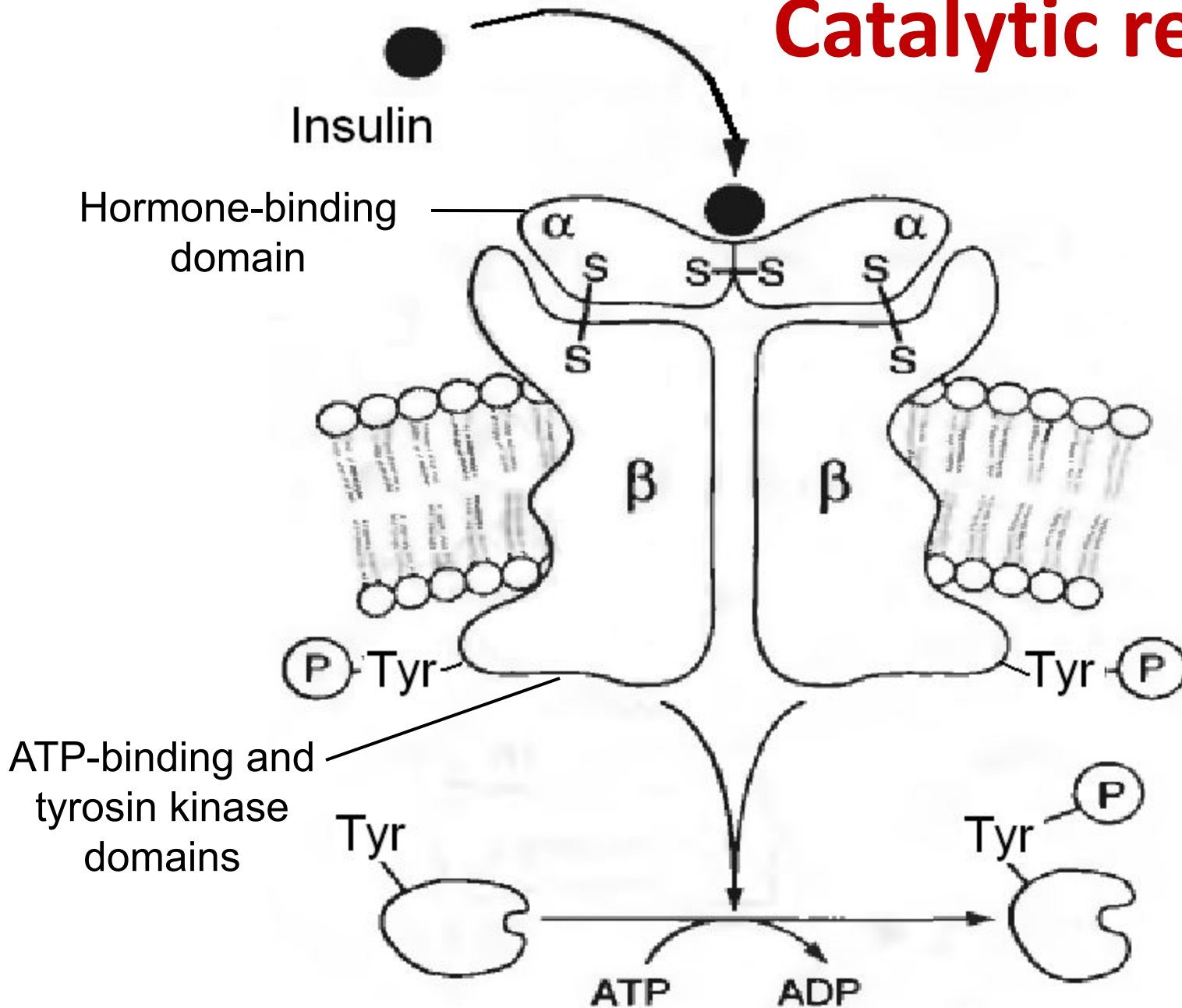




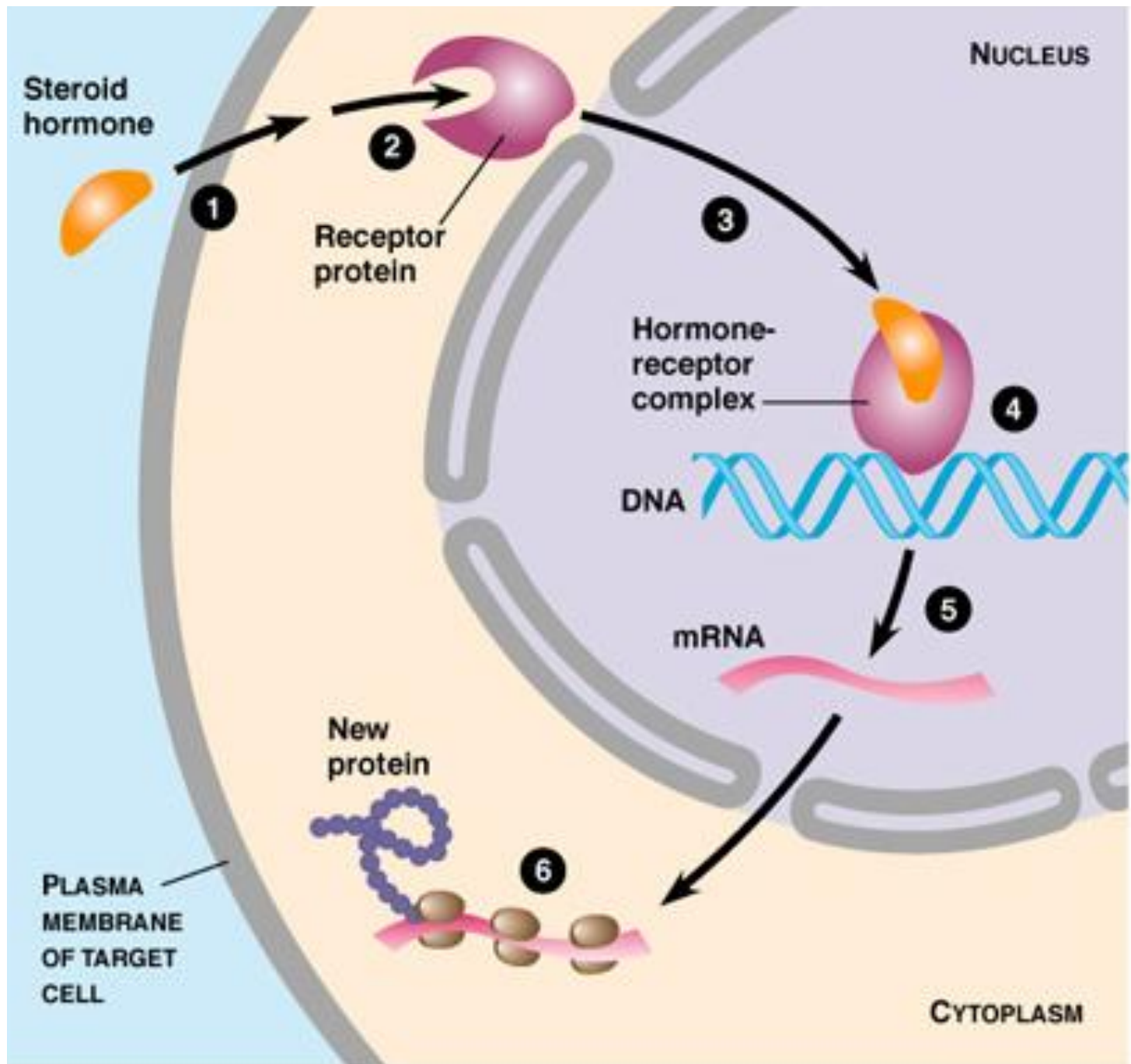
Guanylate cyclase messenger system



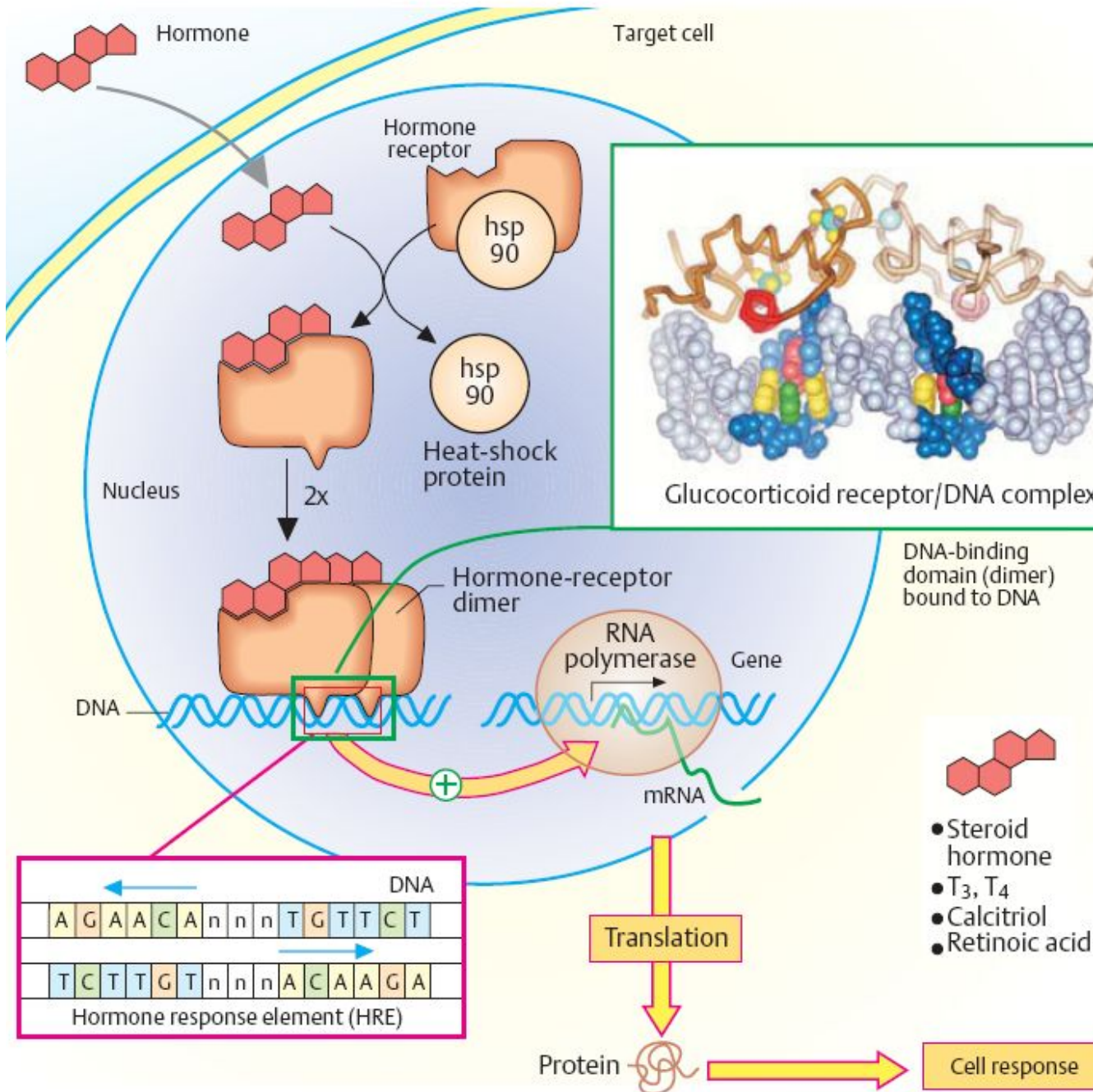
Catalytic receptor



Mechanism of lipophilic hormones action



Mechanism of lipophilic hormones action



Hormonal regulation system

