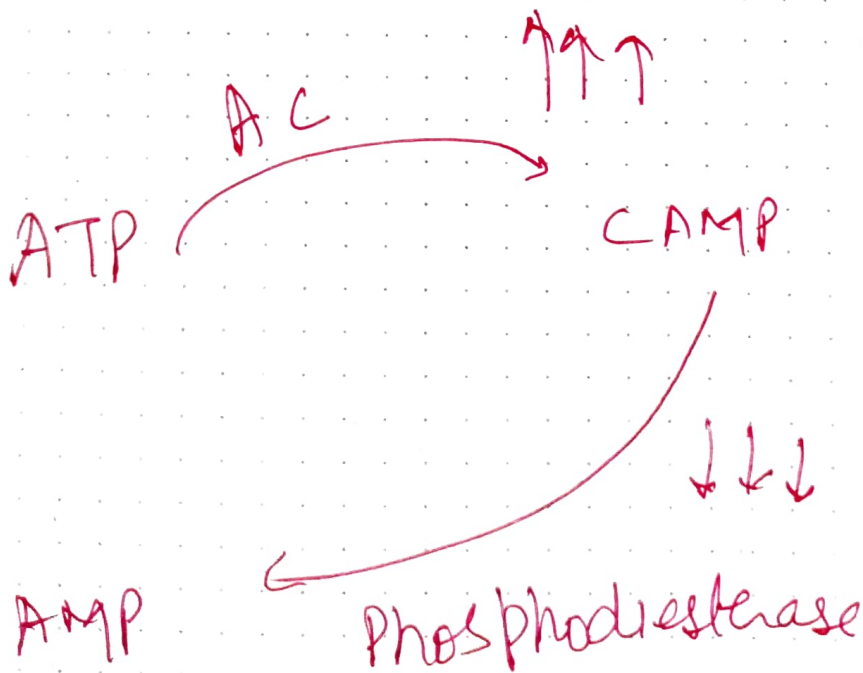
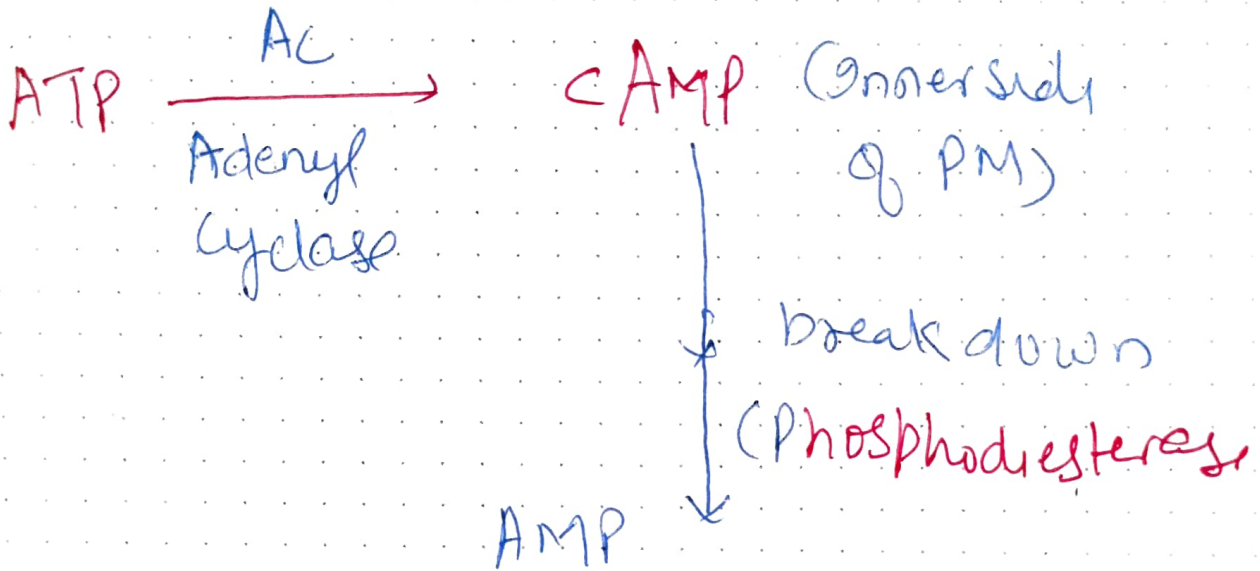


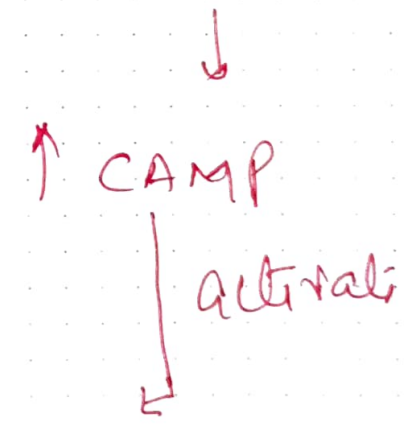
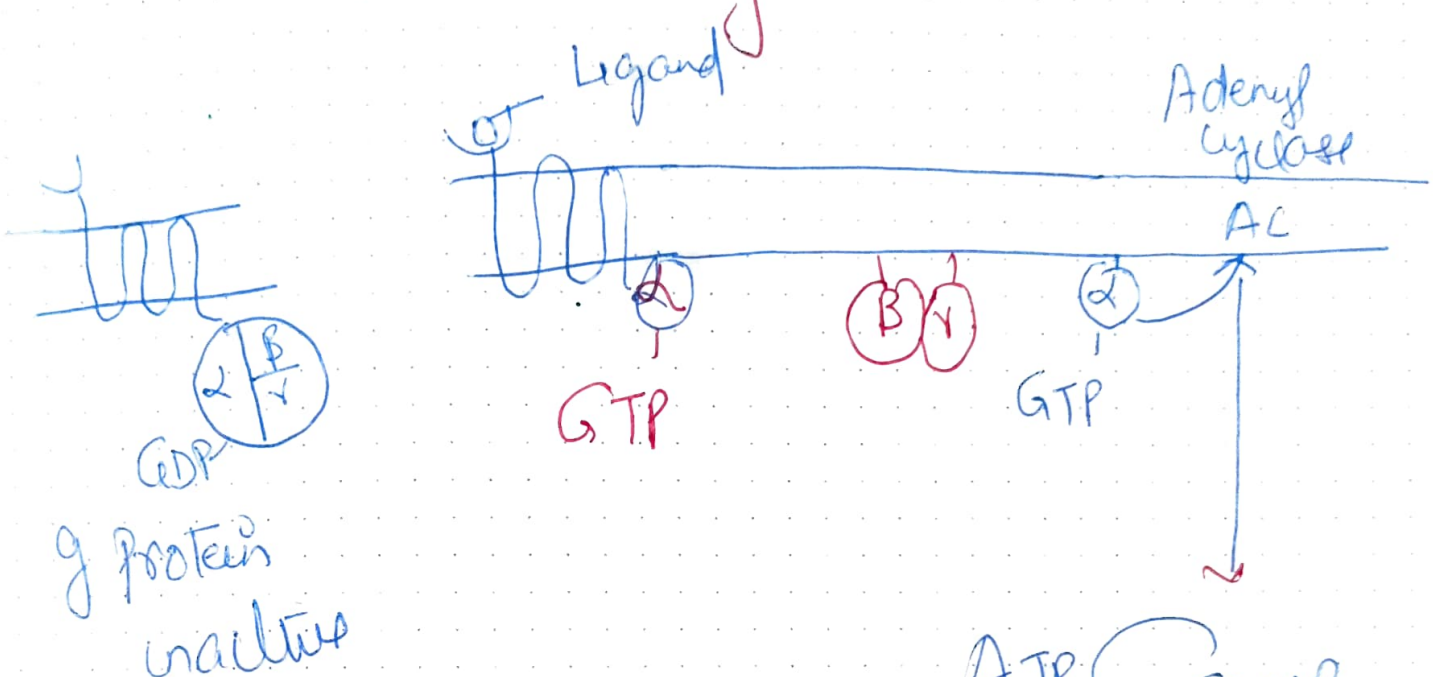
CAMP (2nd messenger) ①

Derivative of ATP

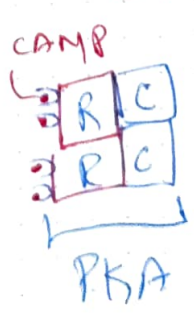


CAMP Pathway

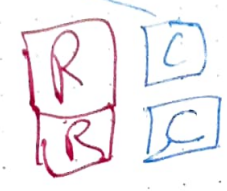
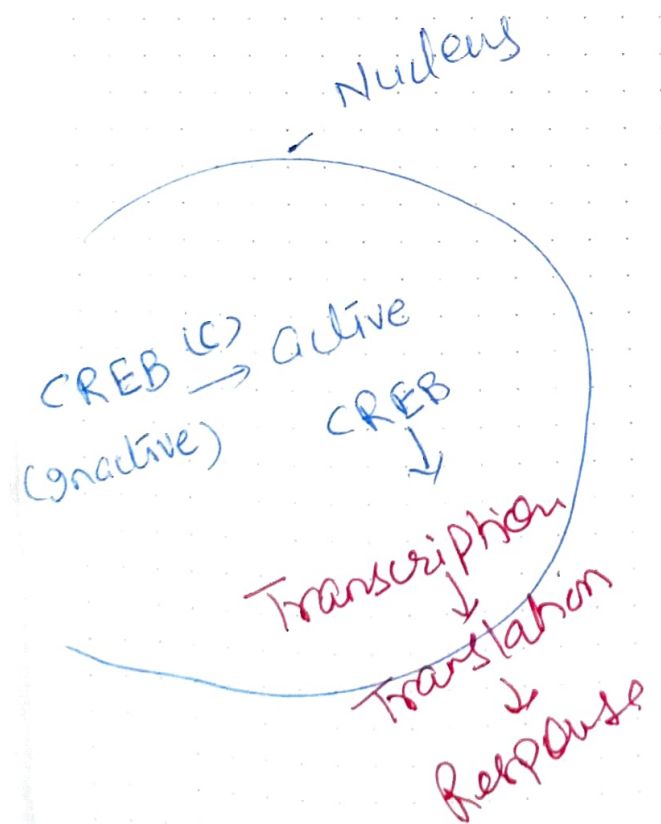
Q



PKA
(Protein Kinase A)

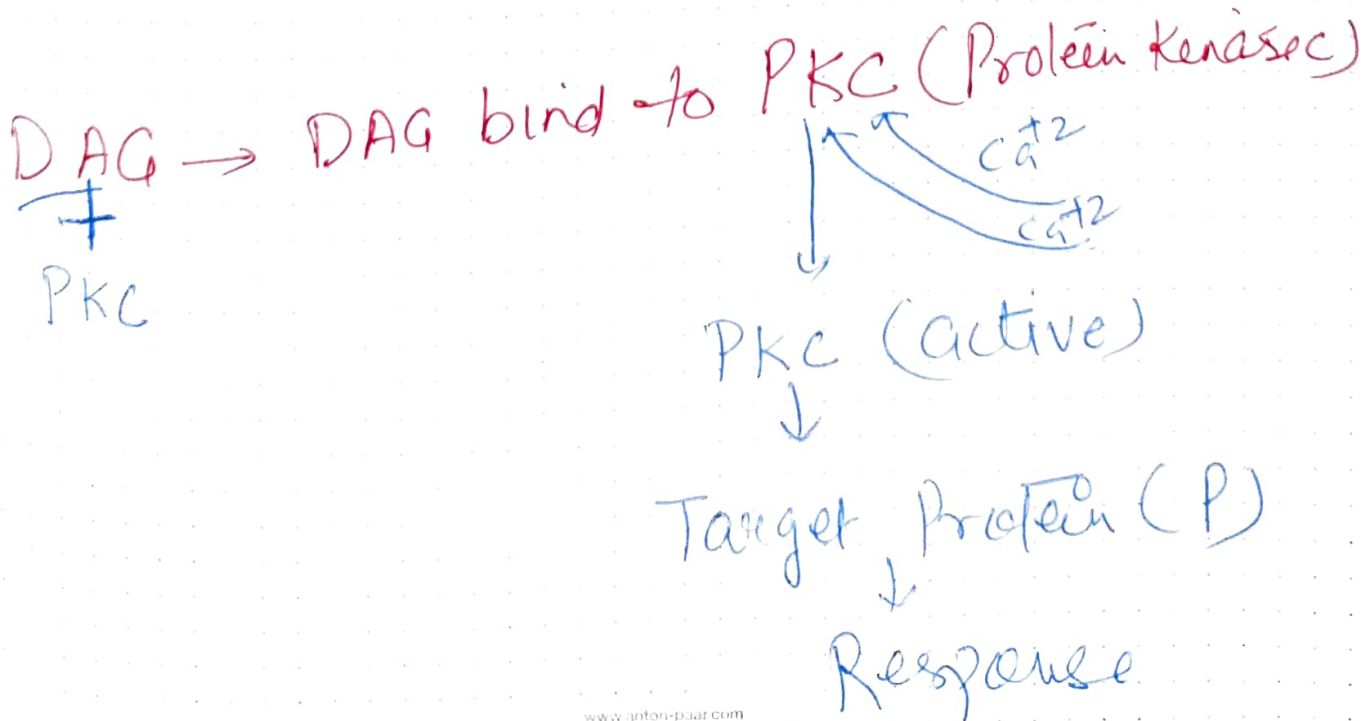
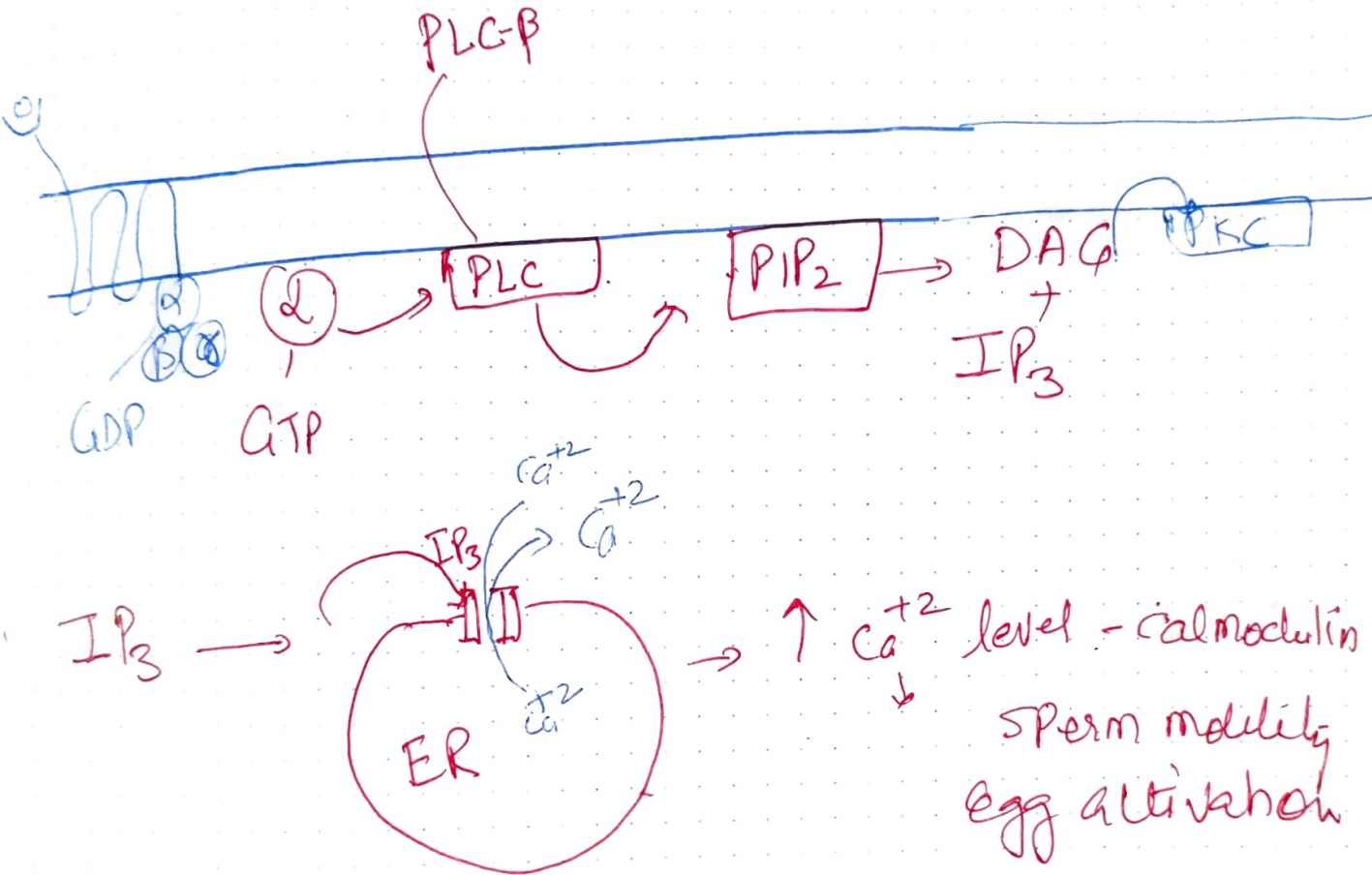


R = Regulatory subunit
C = Catalytic subunit

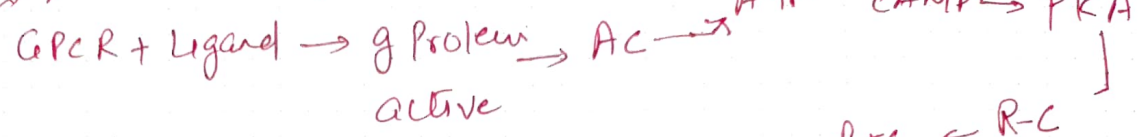


IP₃-DAG Pathway

12 messeng³



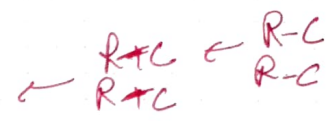
cAMP Pathway



CREB

← Nucleus

→ Active



Cell Sur → GPCR

R₁

IP₃/DAG Pathway

Ligand +

GPCR →

~~Gα~~ → PLCβ →

PIP₂ →

DAG →

IP₃ ↓

PKC + Ca⁺²

PKC active

target cell activation

