

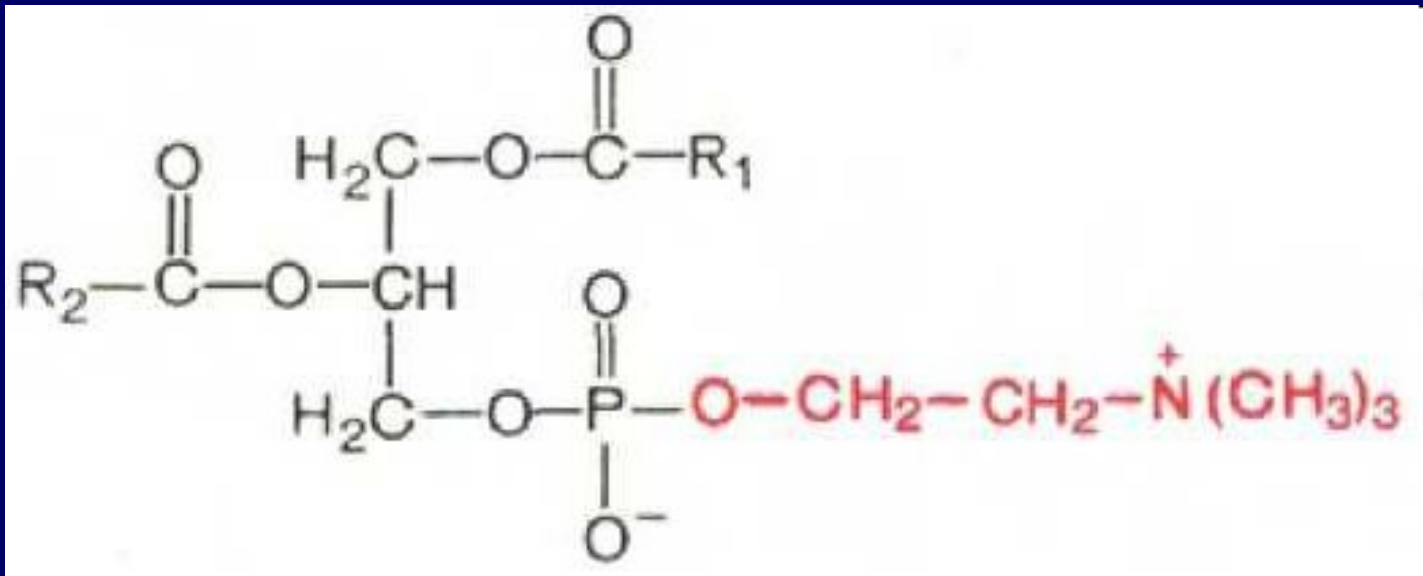
**Les membranes
biologiques. L'organisation
structurale.**

**La participation
des membranes
à l'organisation
et à la régulation
du métabolisme
de la cellule.**

LES LIPIDES MEMBRANAIRES

1. LES PHOSPHOLIPIDES:

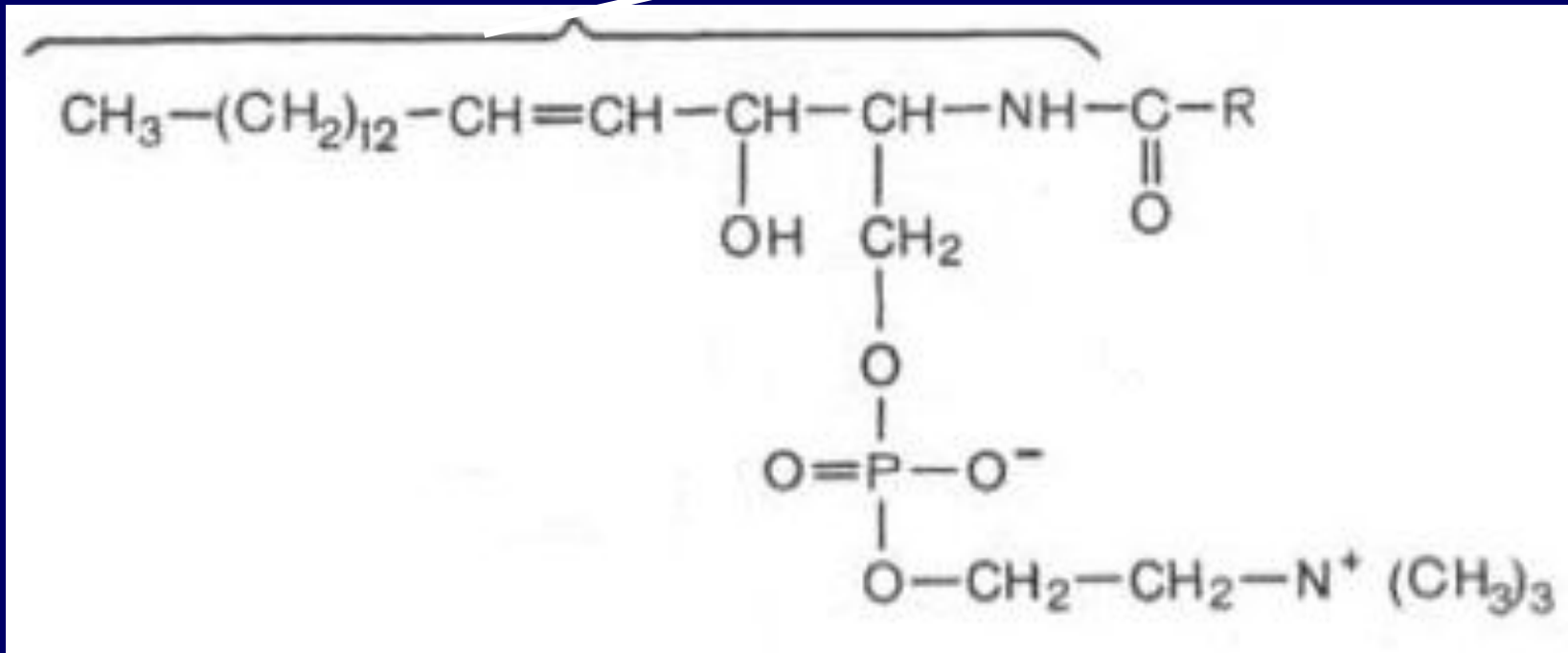
- GLYCEROPHOSPHOLIPIDES
- SPHINGOPHOSPHOLIPIDES



LA PHOSPHATIDYLCHOLINE

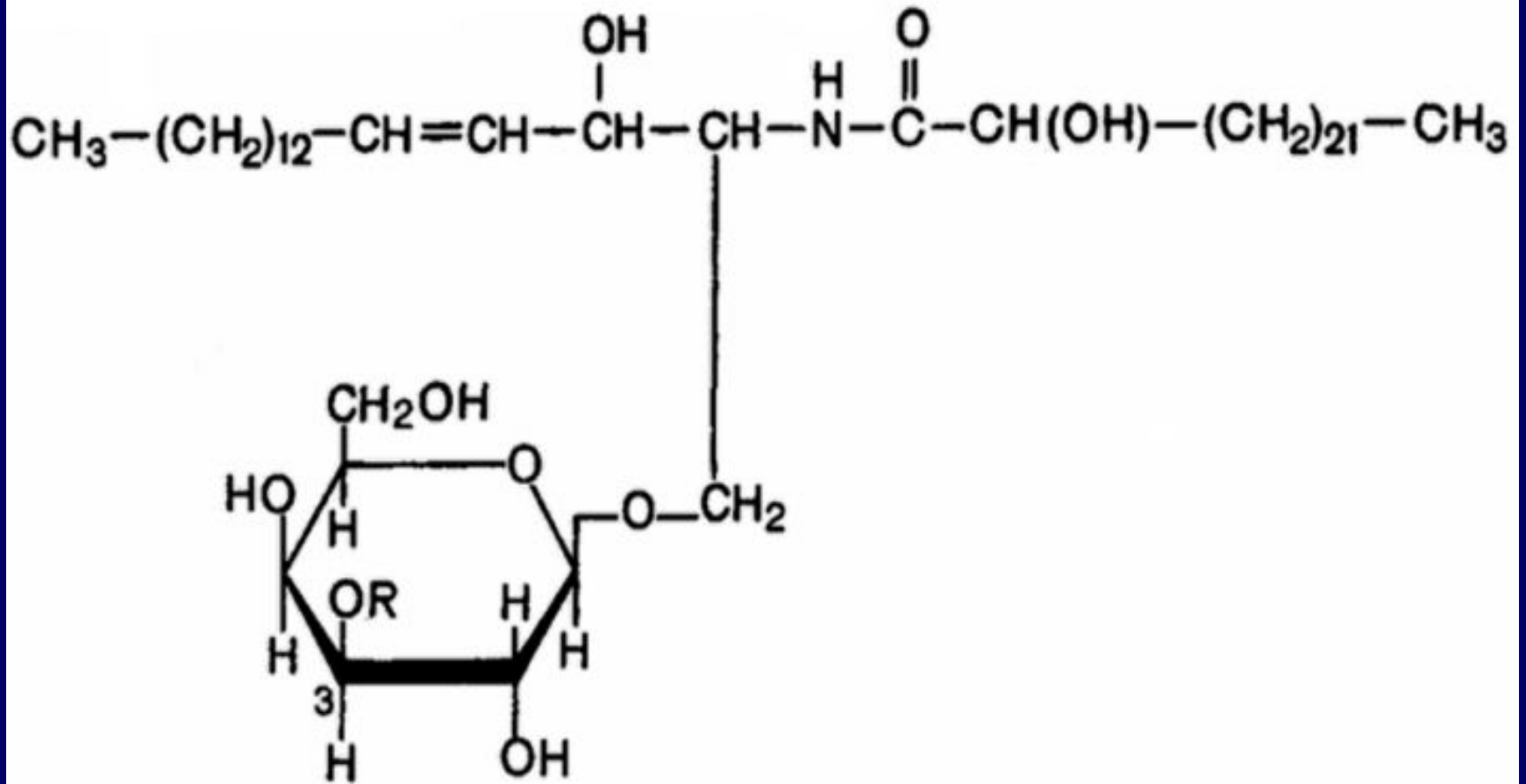
2. LES SPHINGOLIPIDES (SPHINGOMYELINE)

LA SPHINGOSINE



LA SPHINGOMYELINE

3. LES GLYCOLIPIDES



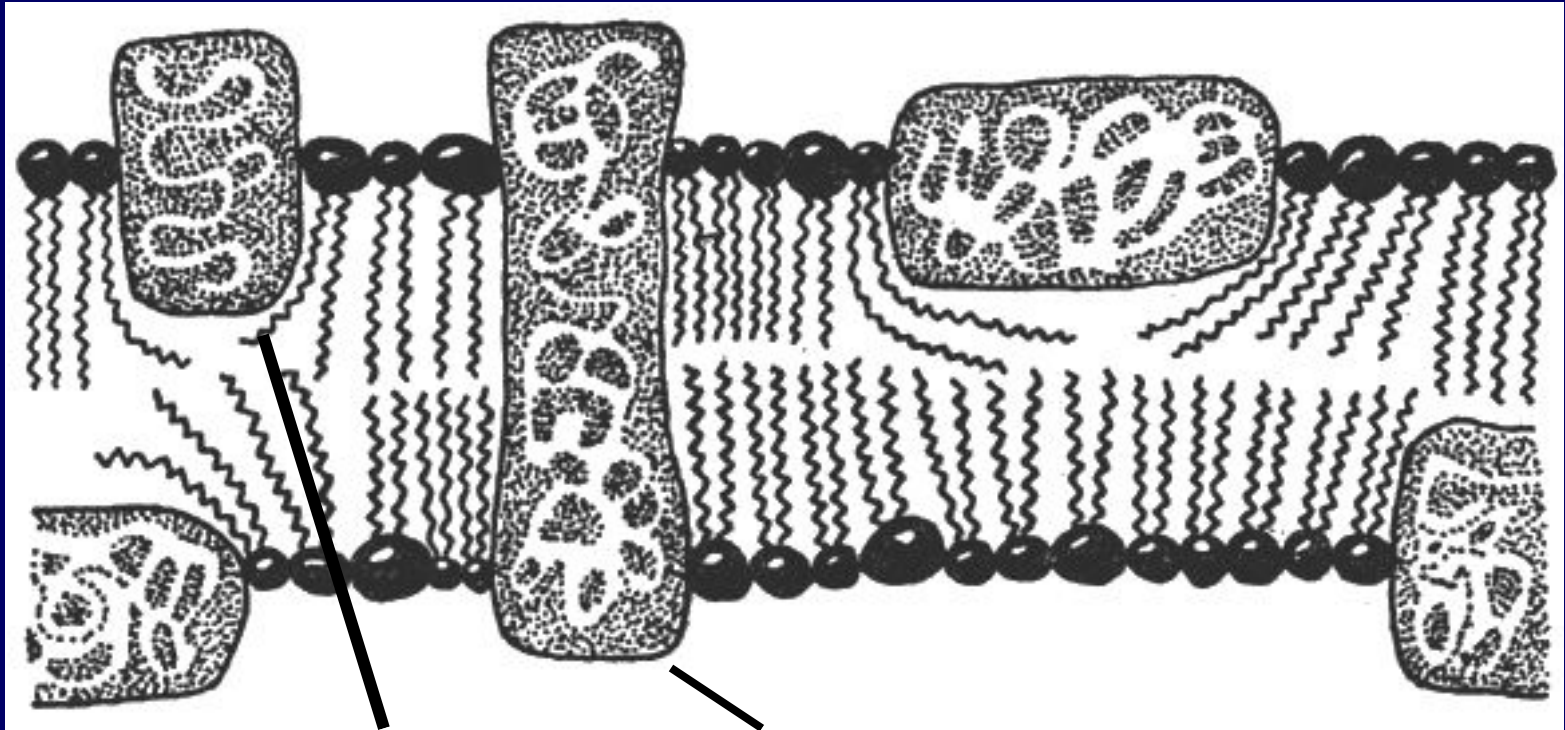
LE GALACTOSYLCERAMIDE

4. LES STEROIDES



LE CHOLESTEROL

LES PROTEINES MEMBRANAIRES

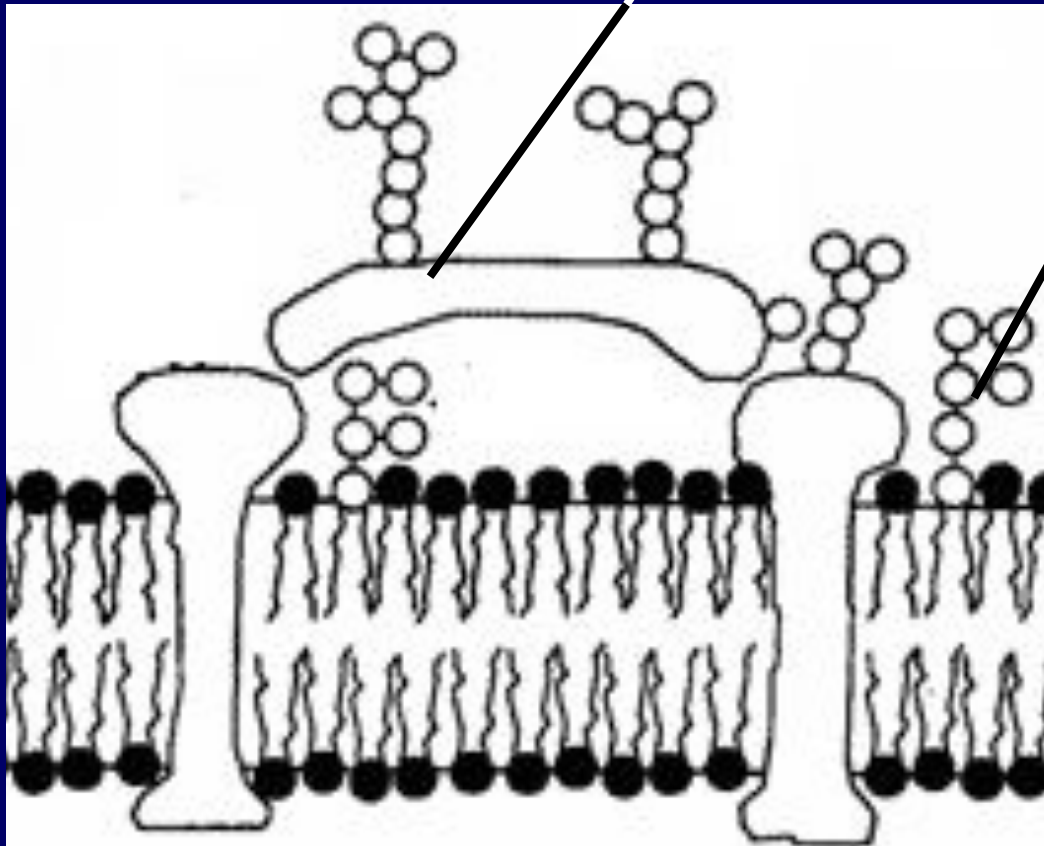


PERIPHERIQUES

INTEGRALES

LA COMPOSITION DE LA MEMBRANE CELLULAIRE

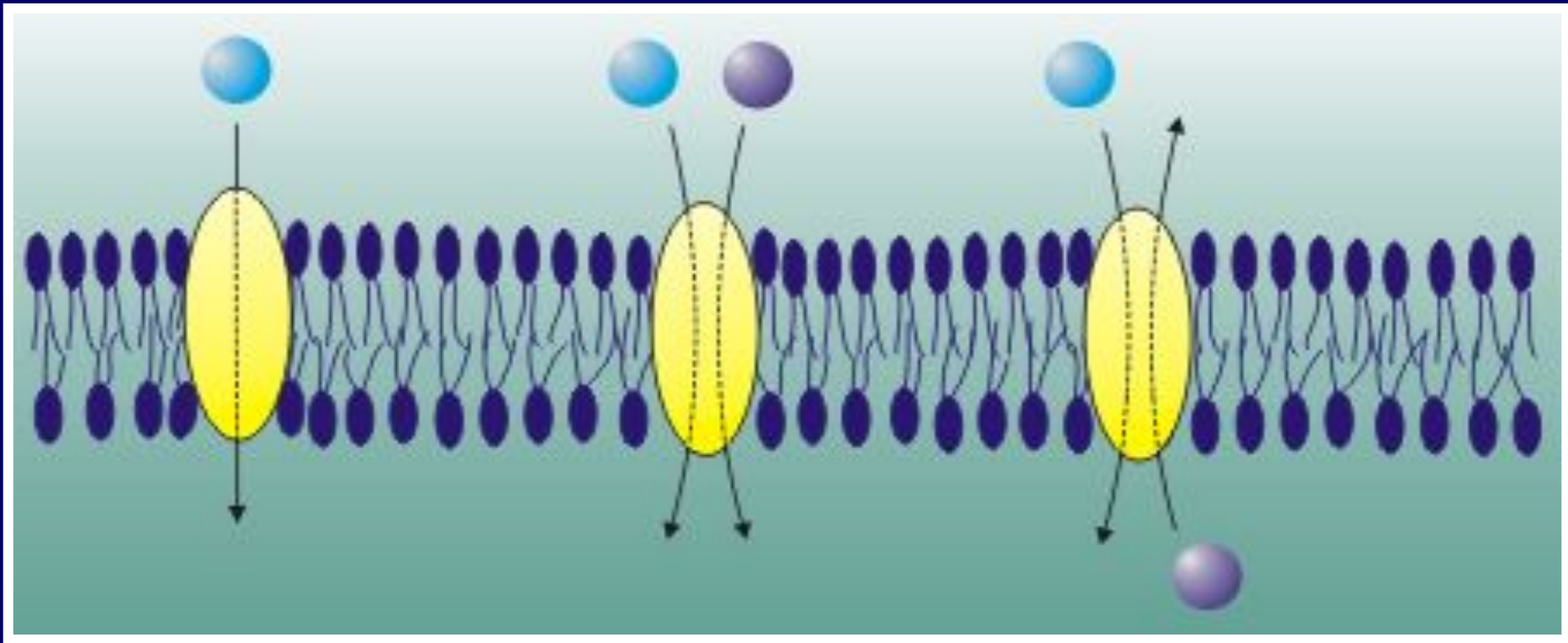
LA PROTEINE GLYCOSYLEE



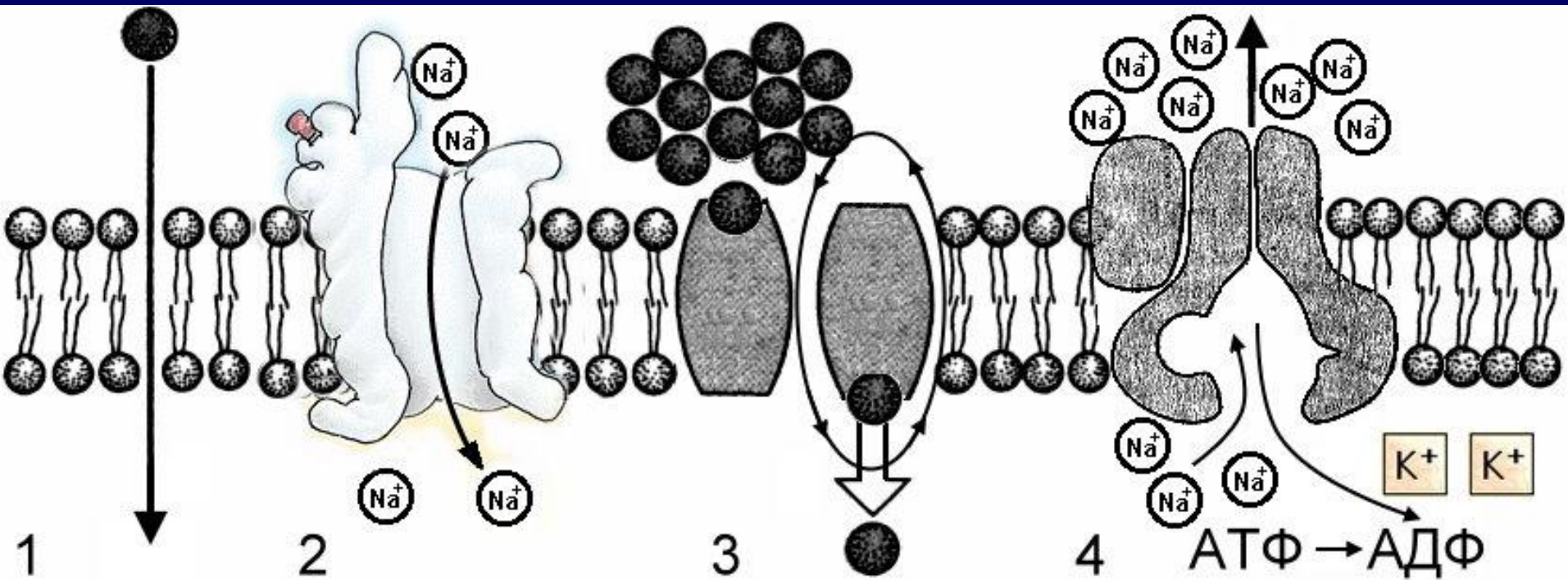
LE
GLYCOLIPIDE

LA COUCHE
BILIPIDIQUE

LE TRANSPORT DES SUBSTANCES A TRAVERS LA MEMBRANE



L'UNIPOINT LE SYMPOINT L'ANTIPOINT



LA DIFFUSION:

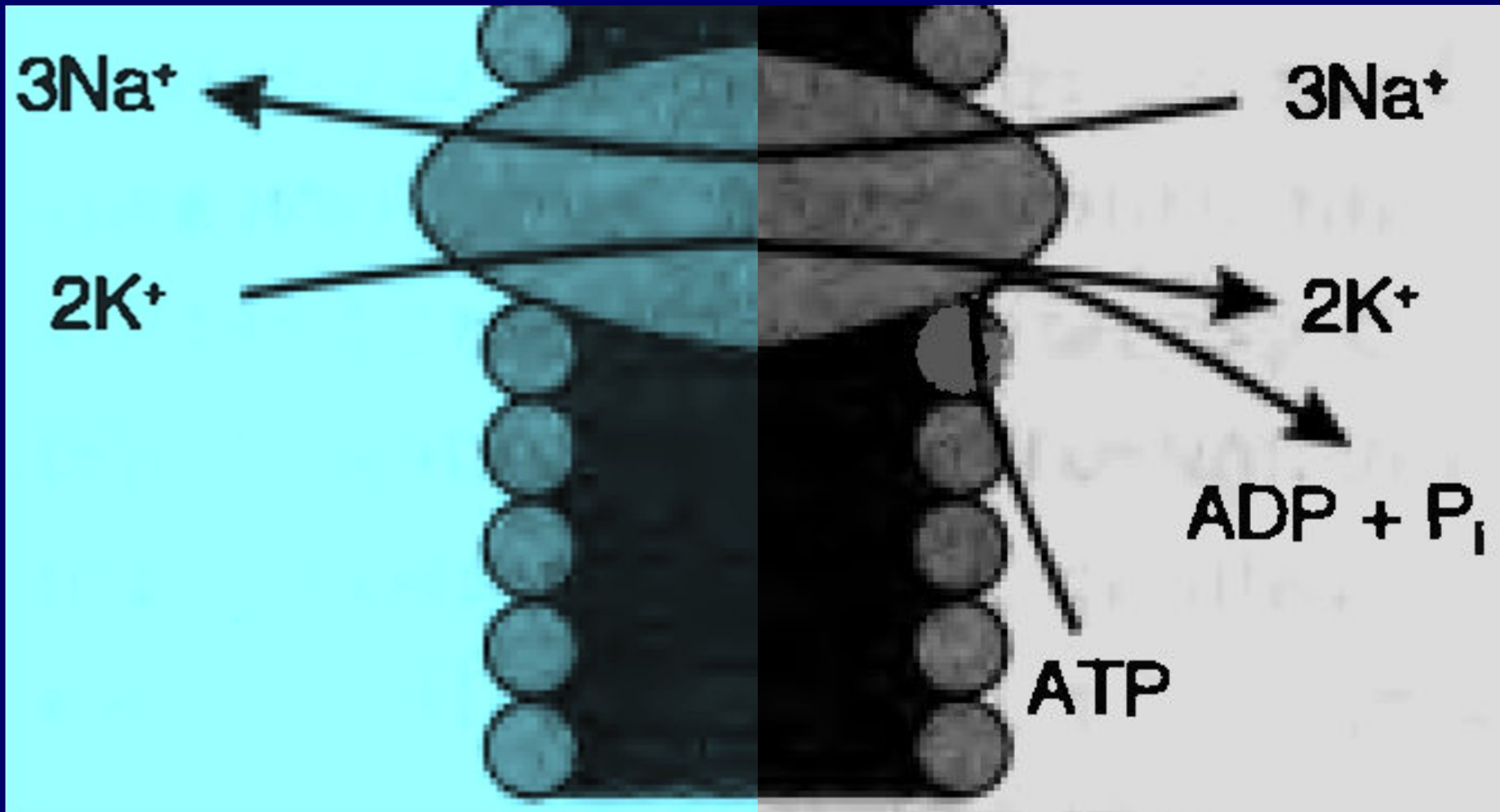
1 - PASSIVE;

2 - A L'AIDE DU CANAL IONIQUE;

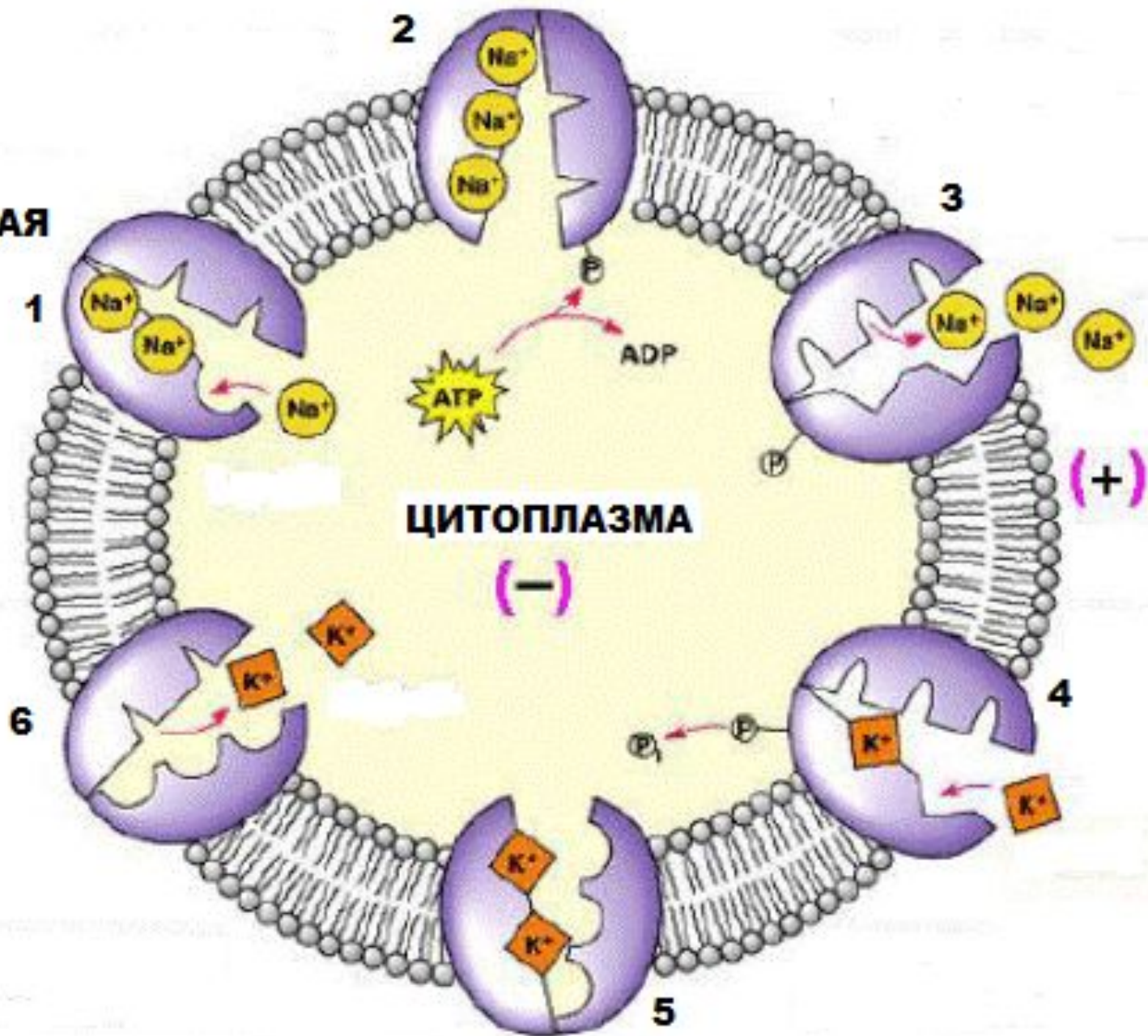
3 - A L'AIDE DE LA TRANSFERASE;

4 - LE TRANSPORT ACTIF

Na^+ , K^+ - ATP-ase



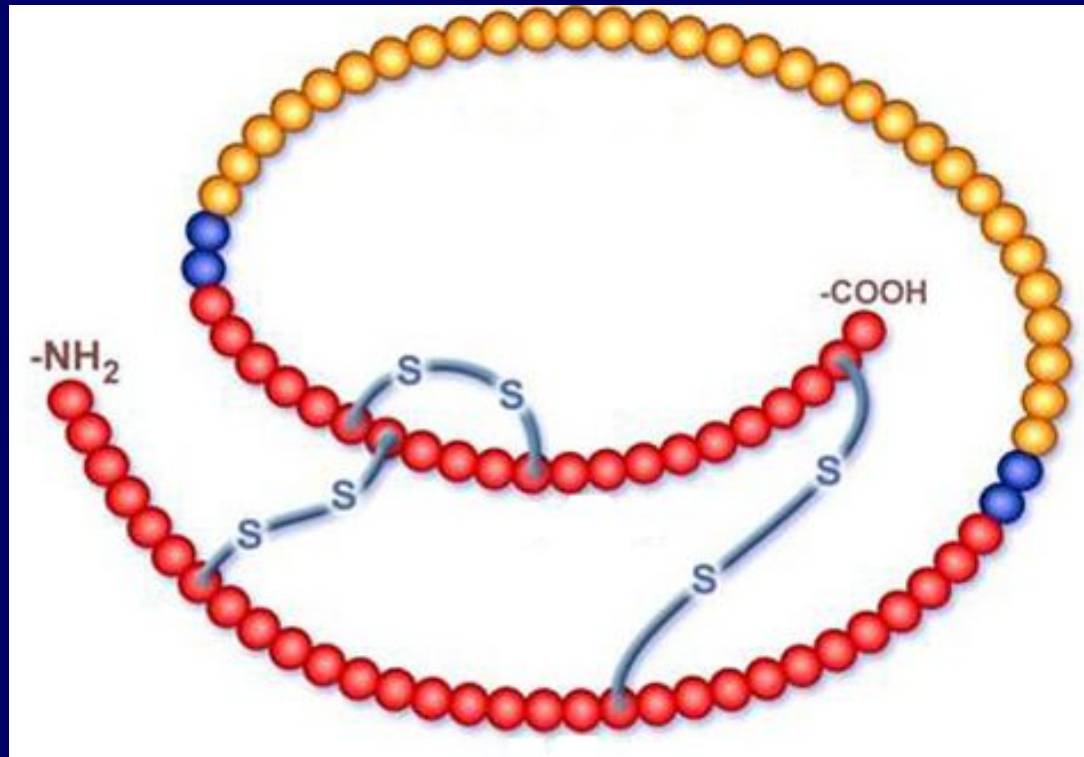
**ВНЕКЛЕТОЧНАЯ
СРЕДА**



ЦИТОПЛАЗМА

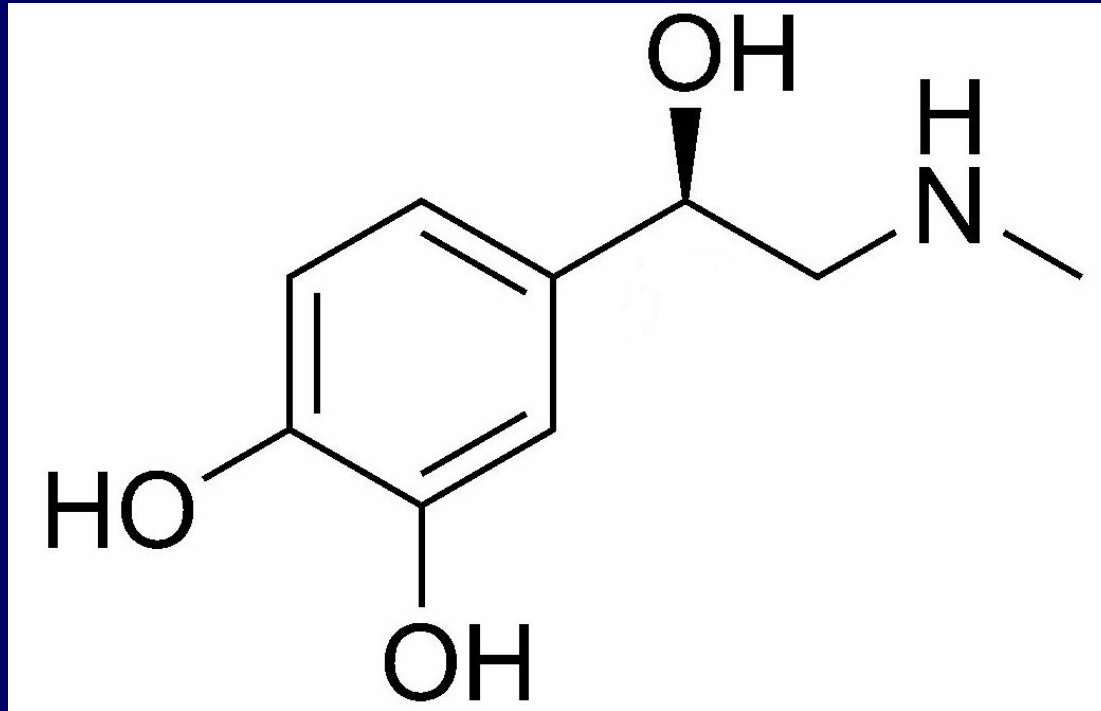
LA CLASSIFICATION DES HORMONES

1. PEPTIDIQUES ET PROTEIQUES



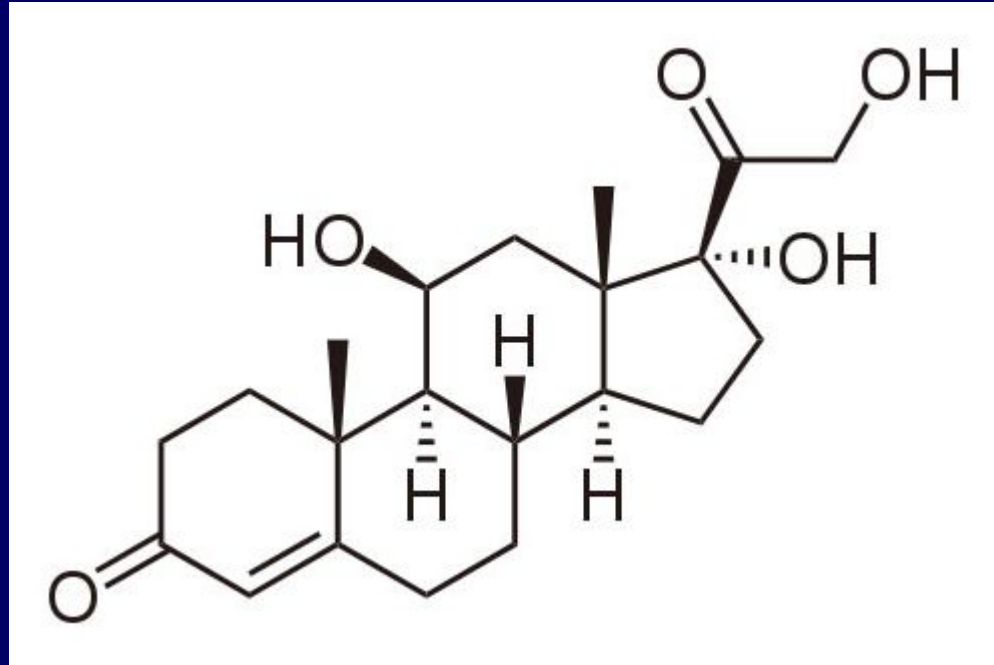
L'INSULINE

2. LES DERIVEES DES ACIDES AMINES



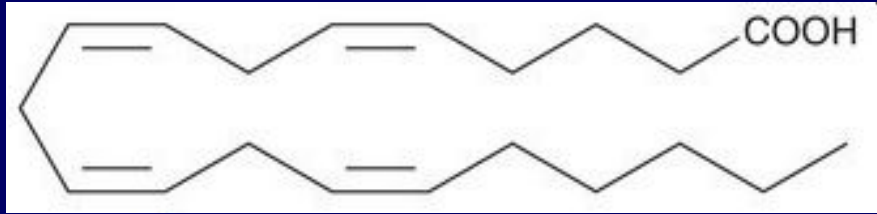
L'ADRENALINE

3. DE LA NATURE STEROÏDE

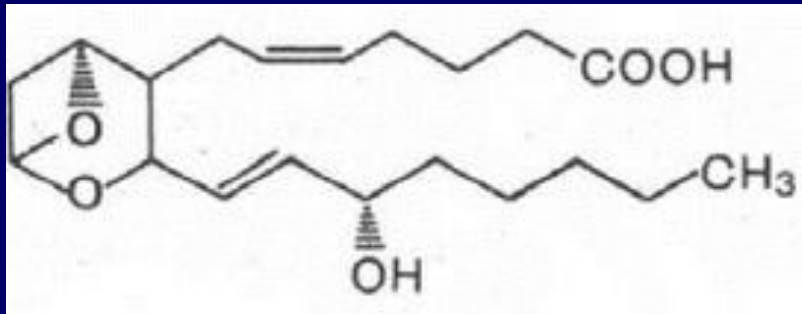


LE CORTISOL

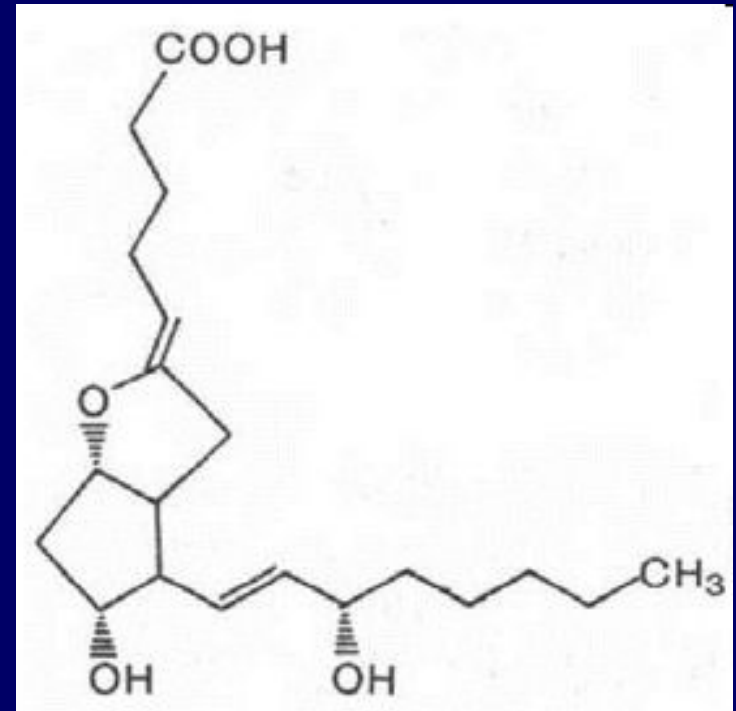
4. LES EICOSANOIDES



**L'ACIDE
ARACHIDONIQUE**



LE THROMBOXANE

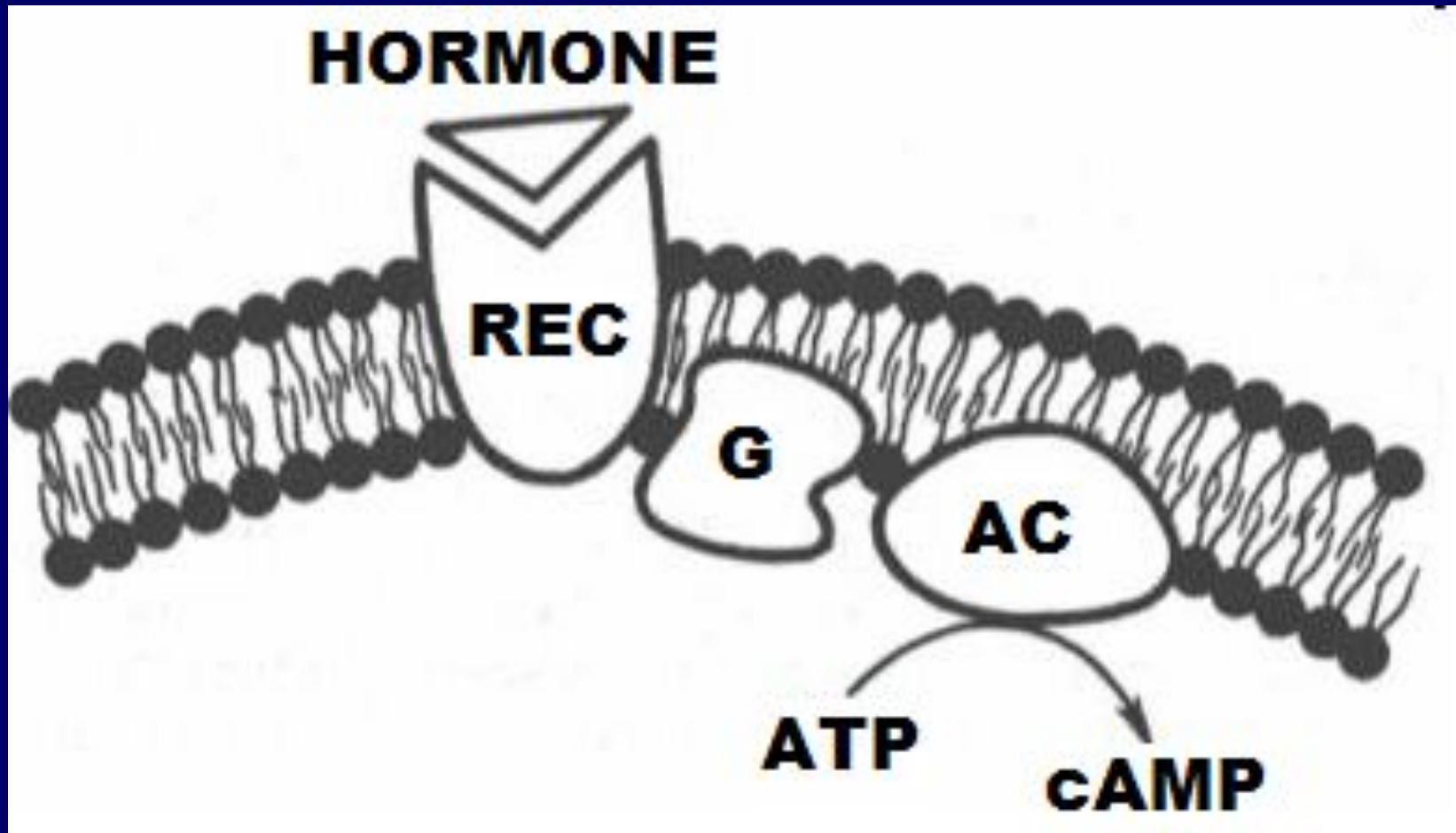


**LA
PROSTACYCLINE**

A₂

LES LEUCOTRIENES

LE SYSTEME D'ADENYLYLATE CYCLASE DES MESSAGERS



~~AMPc~~

← PHOSPHODIESTERASE

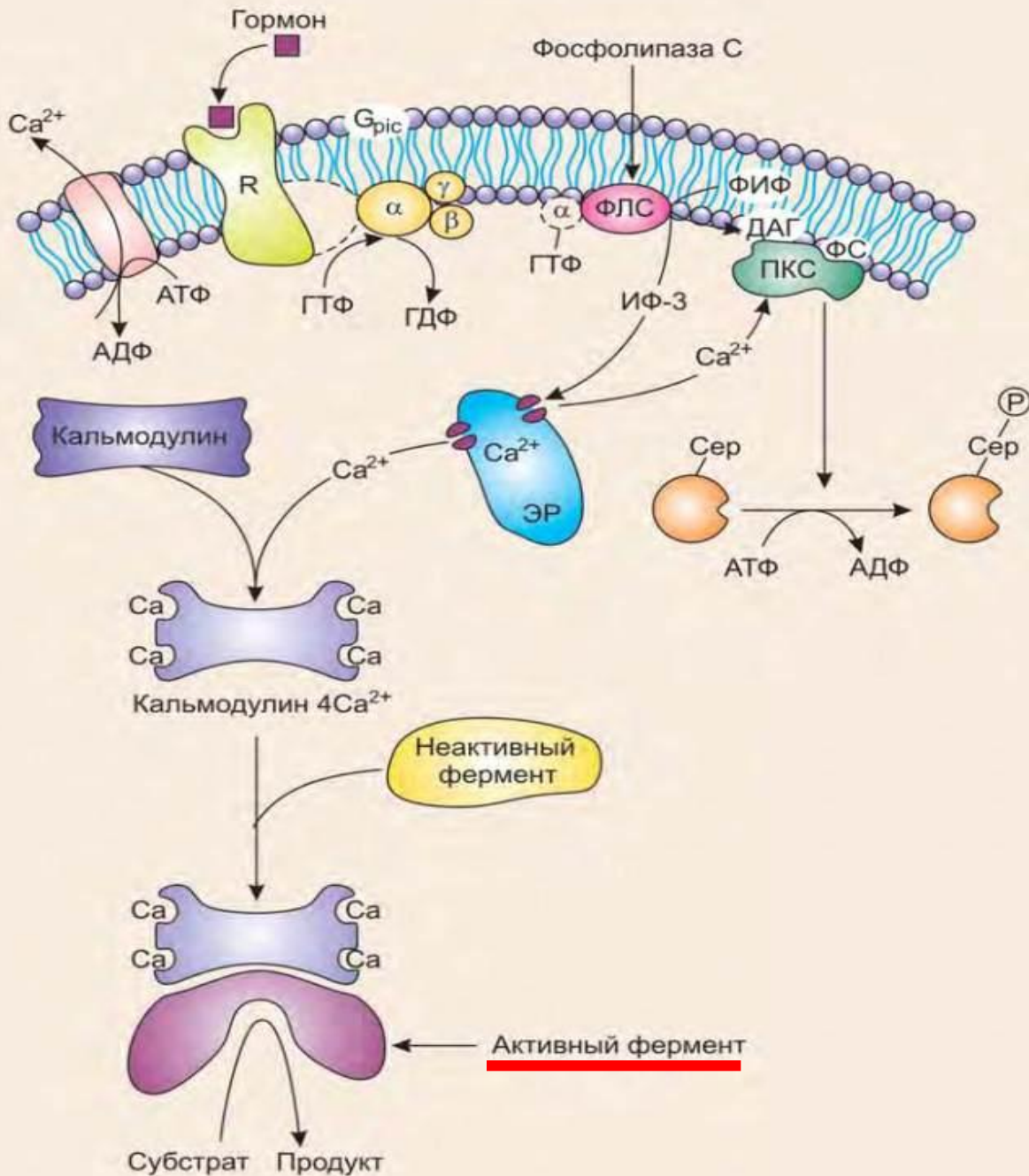
LA PROTEINE
KINASE
INACTIVE

LA PROTEINE
KINASE **ACTIVE**

la phosphorylation

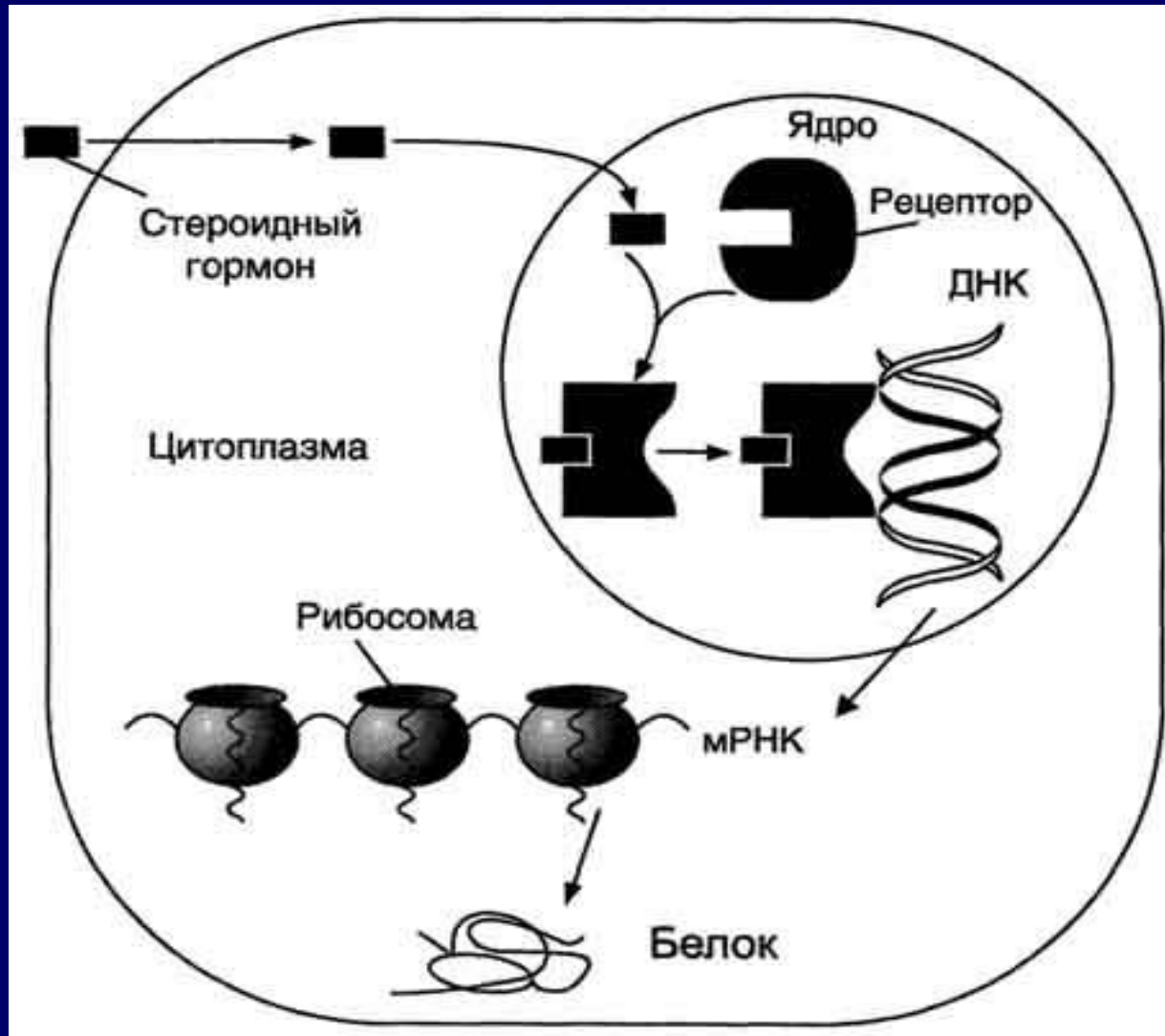
L'ENZYME
INACTIVE

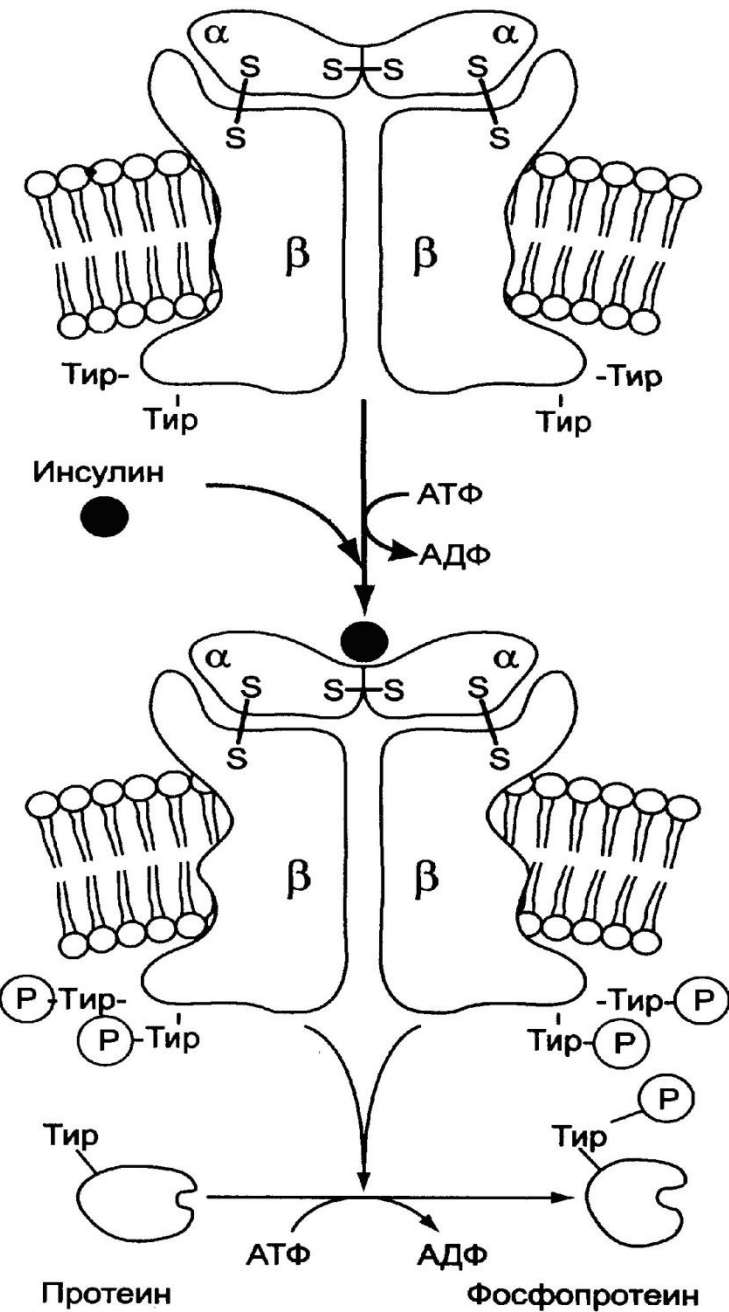
L'ENZYME
ACTIVE



LE SYSTEME D'INOSITOL PHOSPHATE DES MESSAGERS

LA RECEPTION INTRACELLULAIRE





LES RECEPTEURS A ACTIVITE TYROSINE KINASE