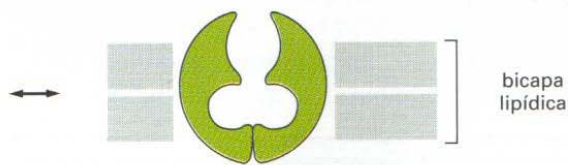
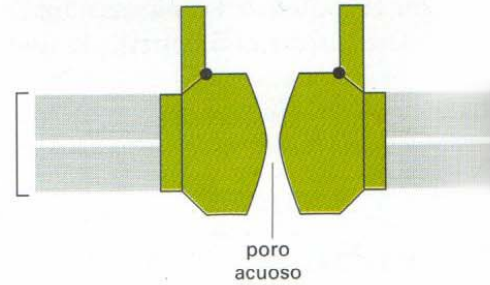




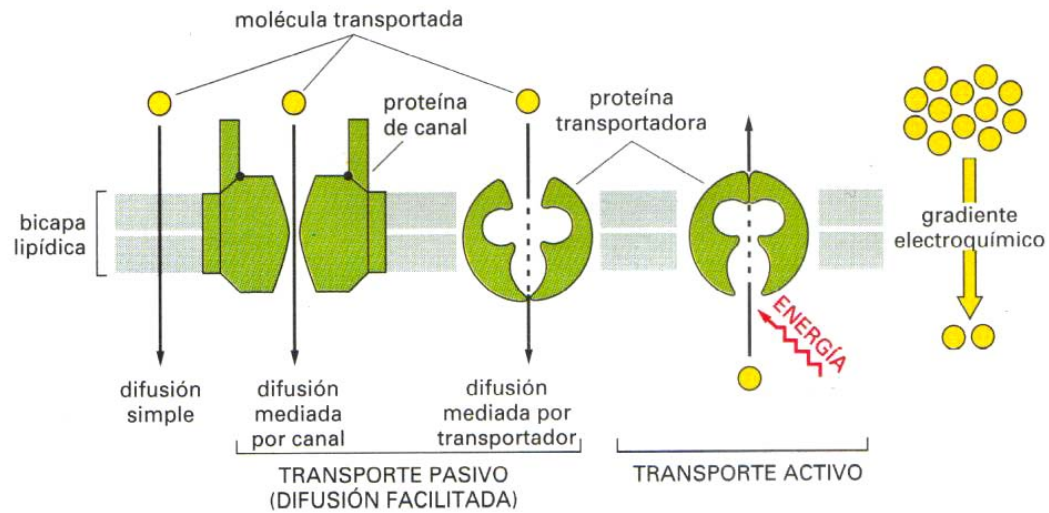
(A) PROTEÍNA TRANSPORTADORA

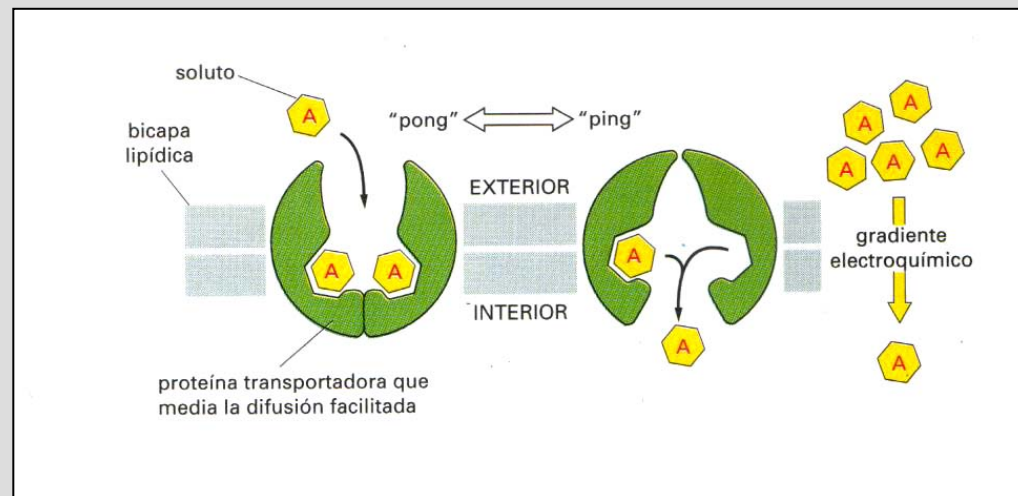
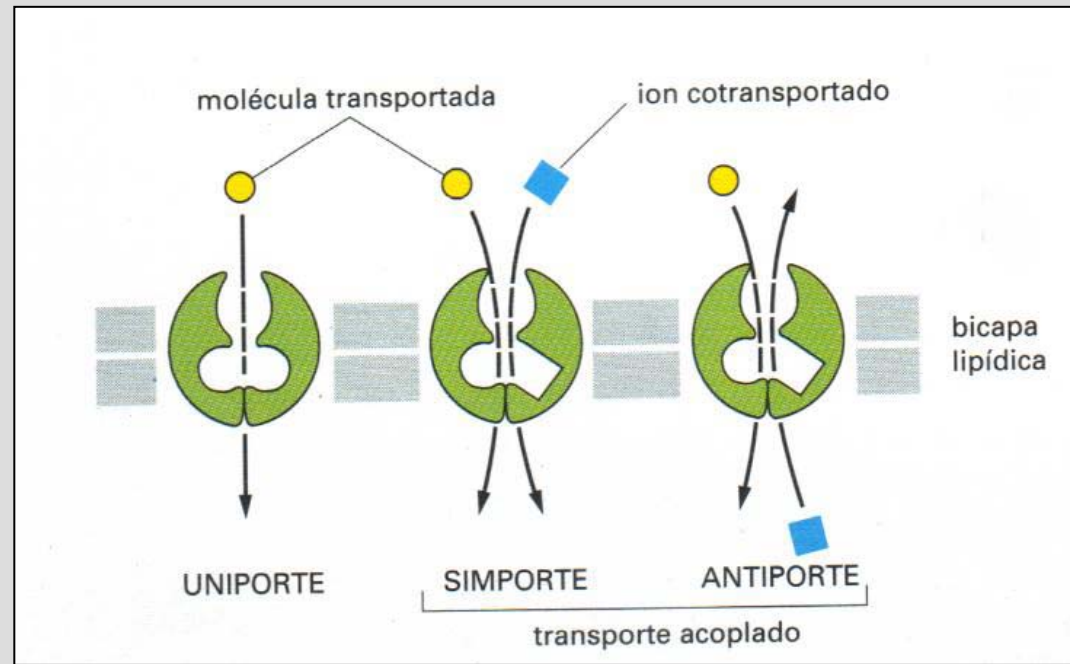


bicapa  
lipídica

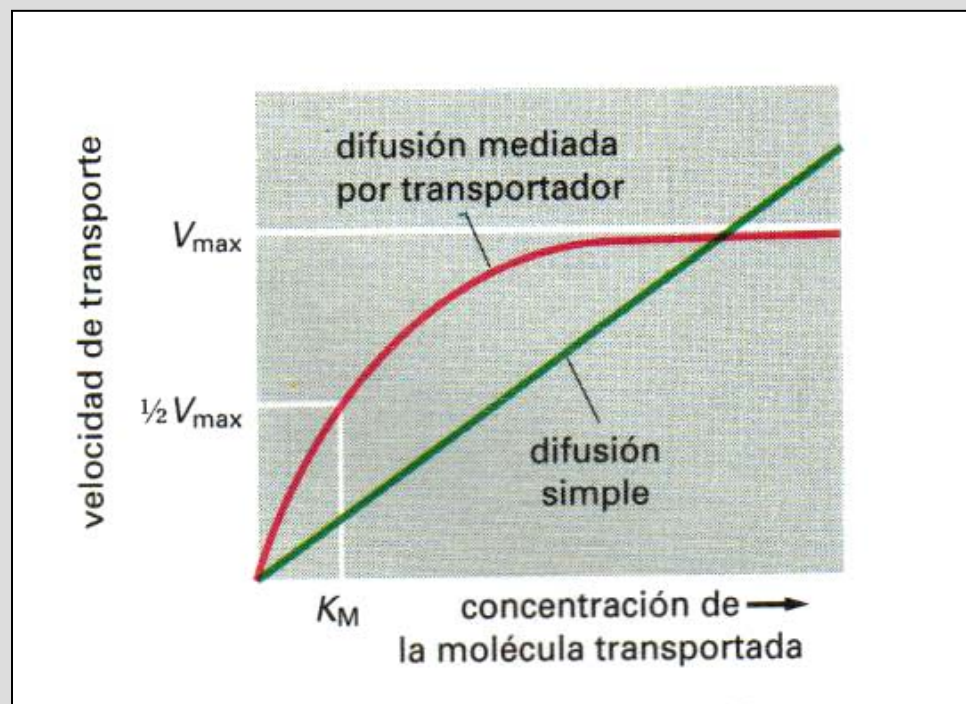
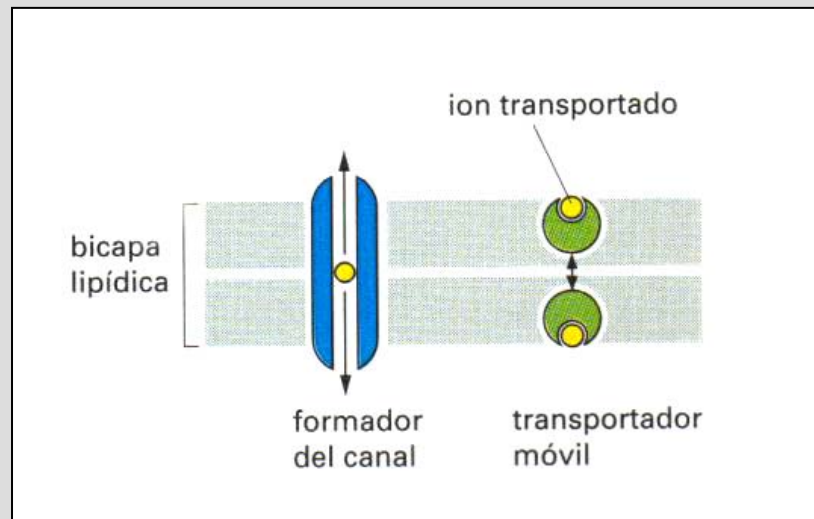


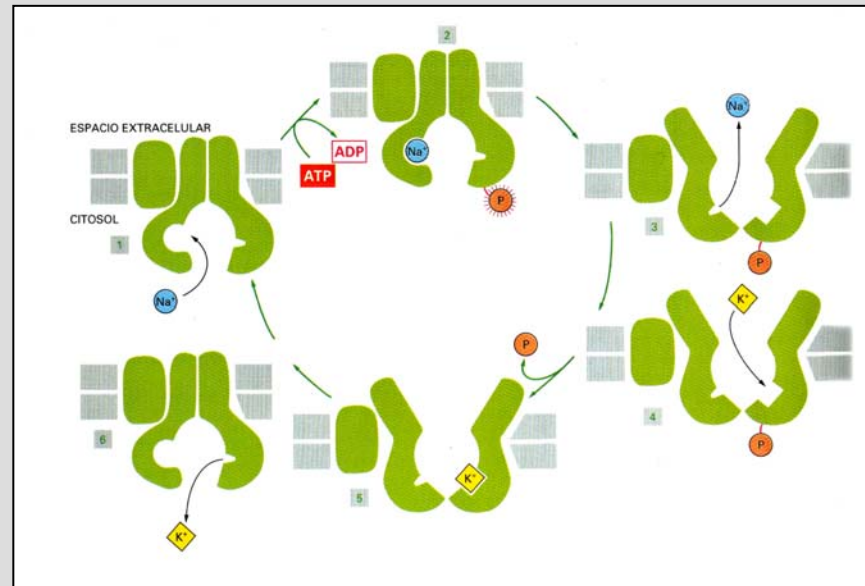
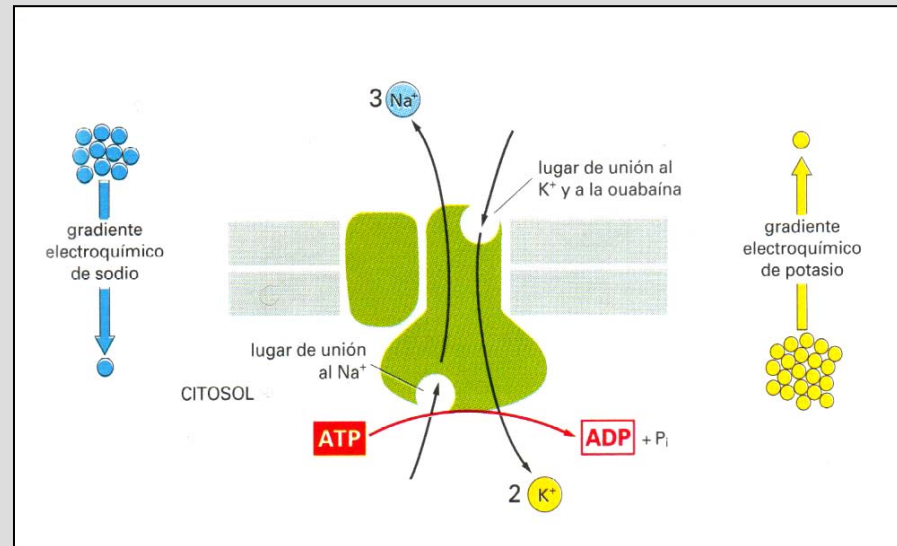
(B) PROTEÍNA DE CANAL

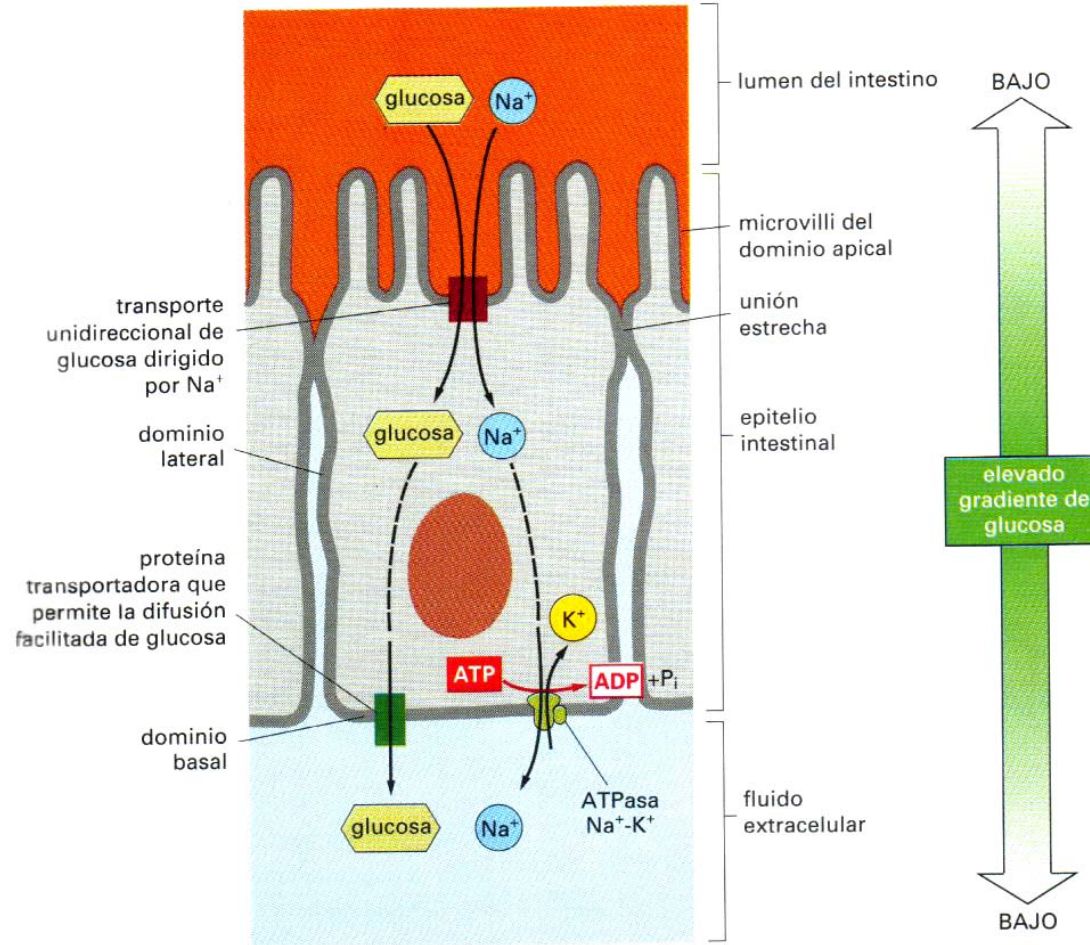




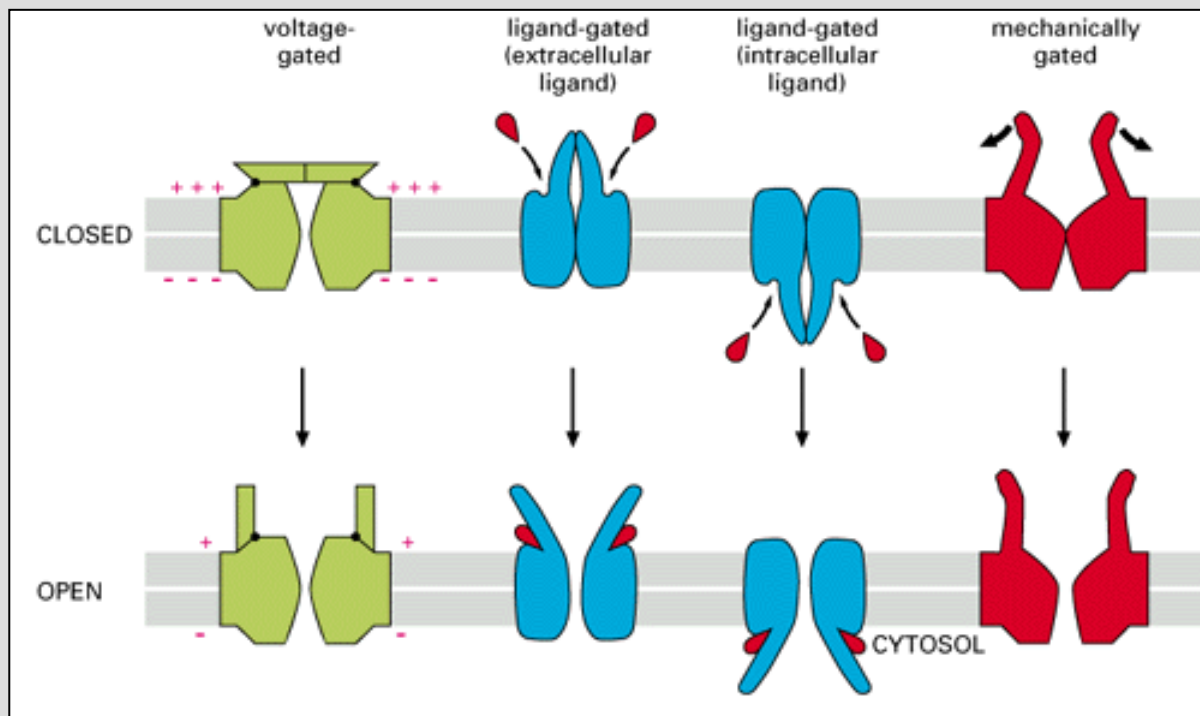


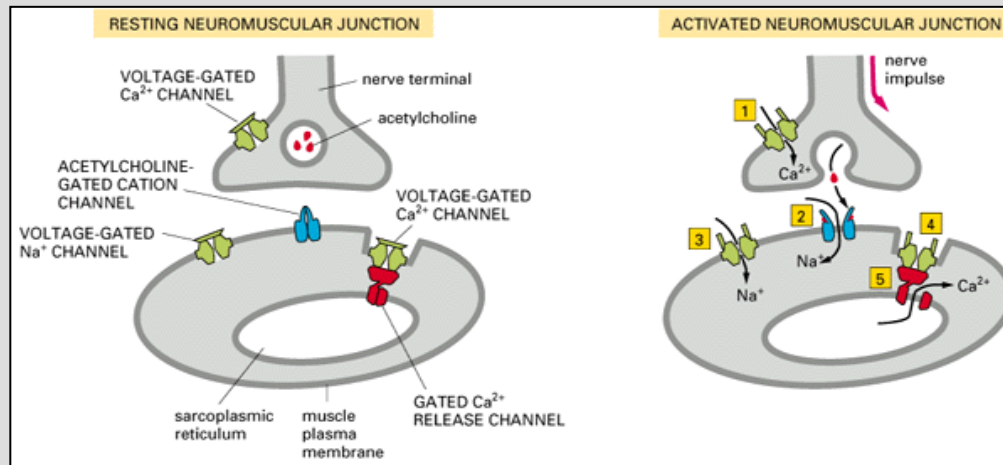
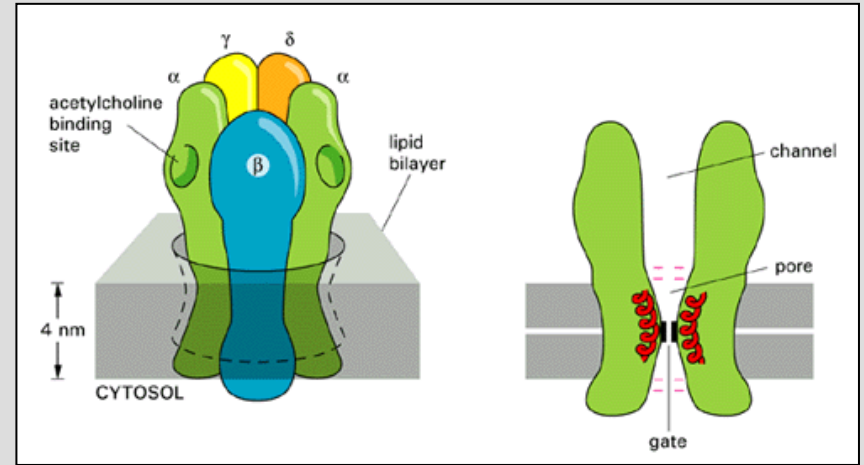
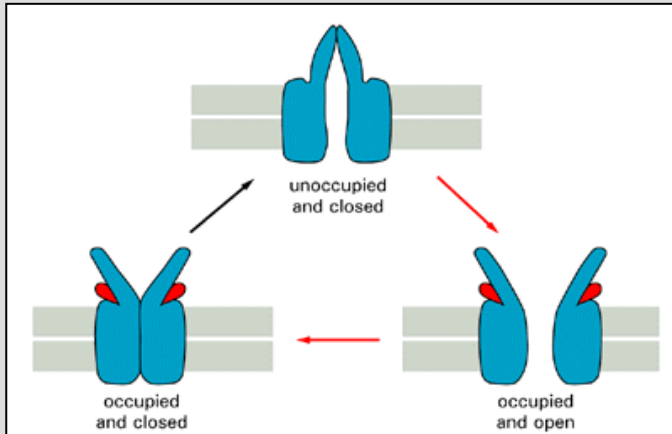






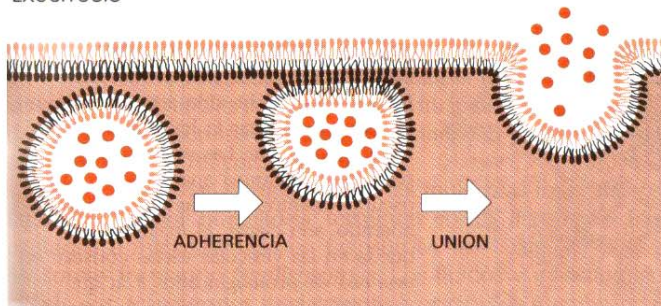
**Proteínas transportadoras y transporte activo a través de membrana**



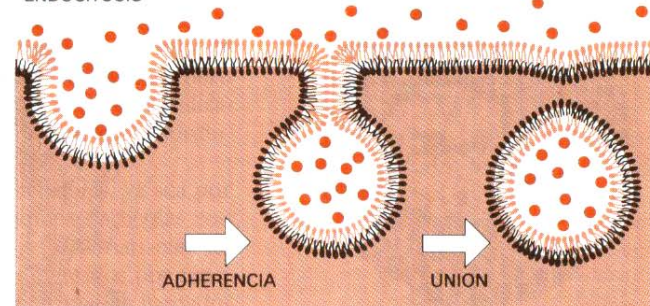




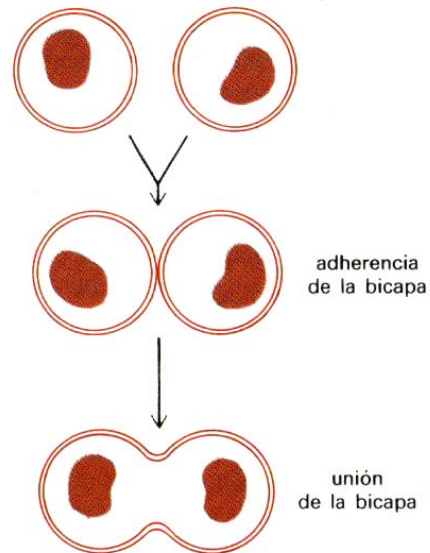
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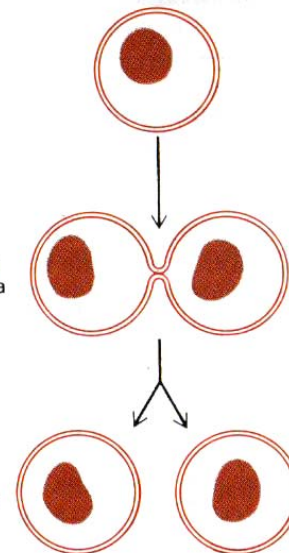
### ENDOCITOSIS

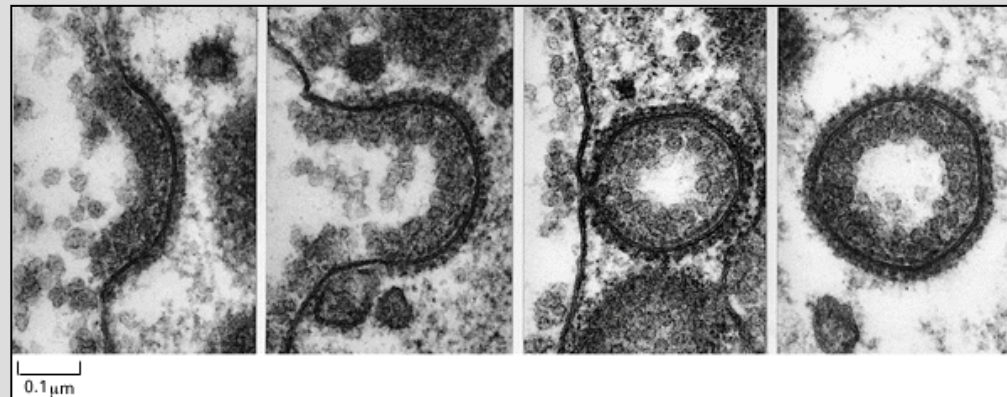
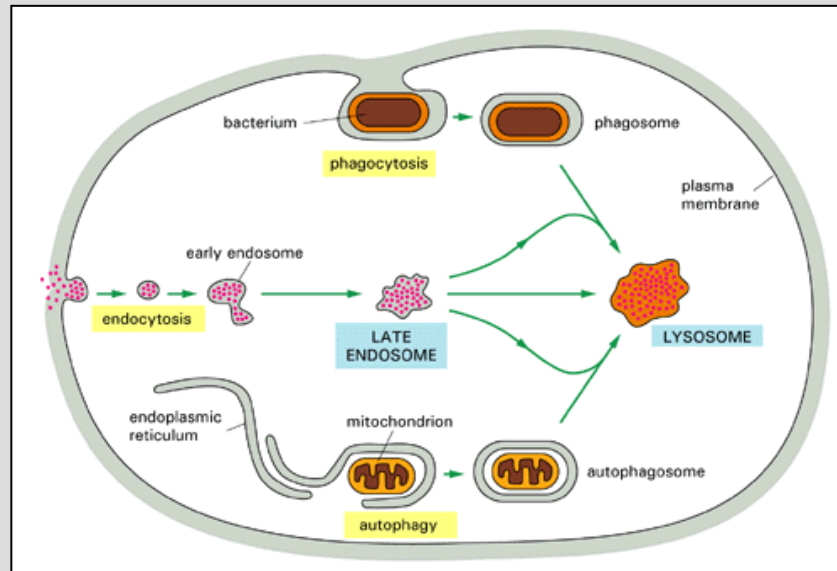


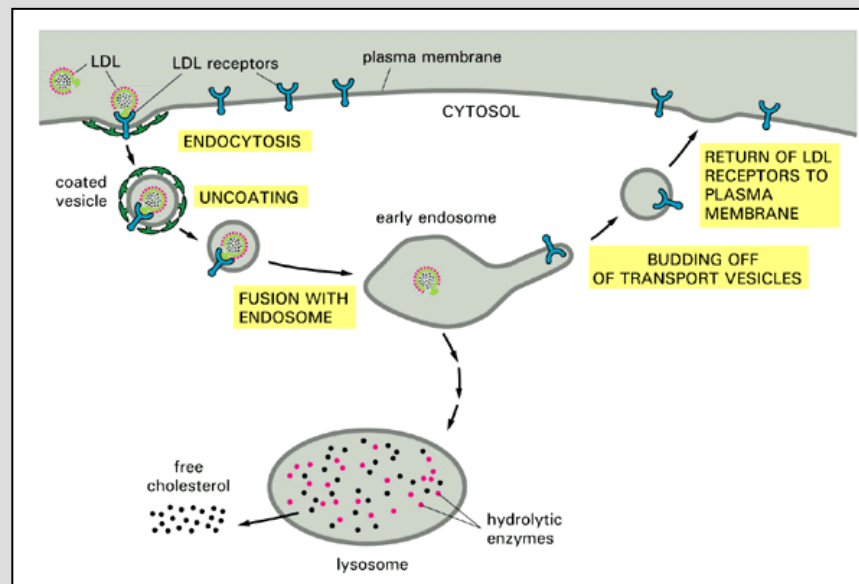
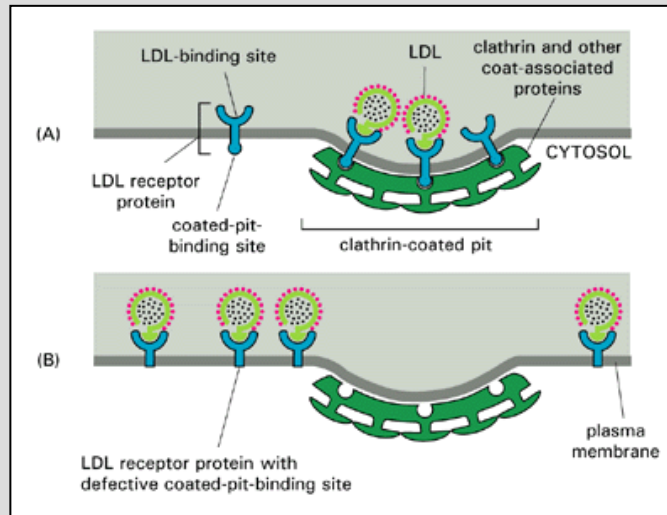
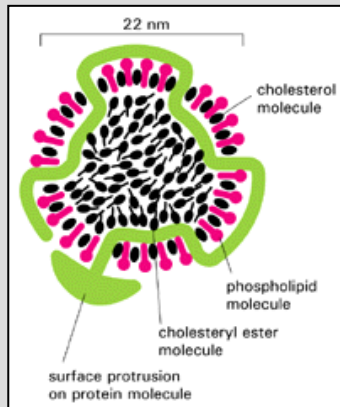
### FUSION CELULAR

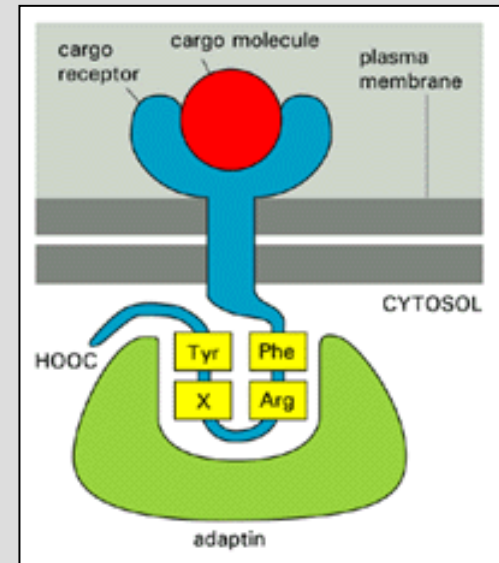
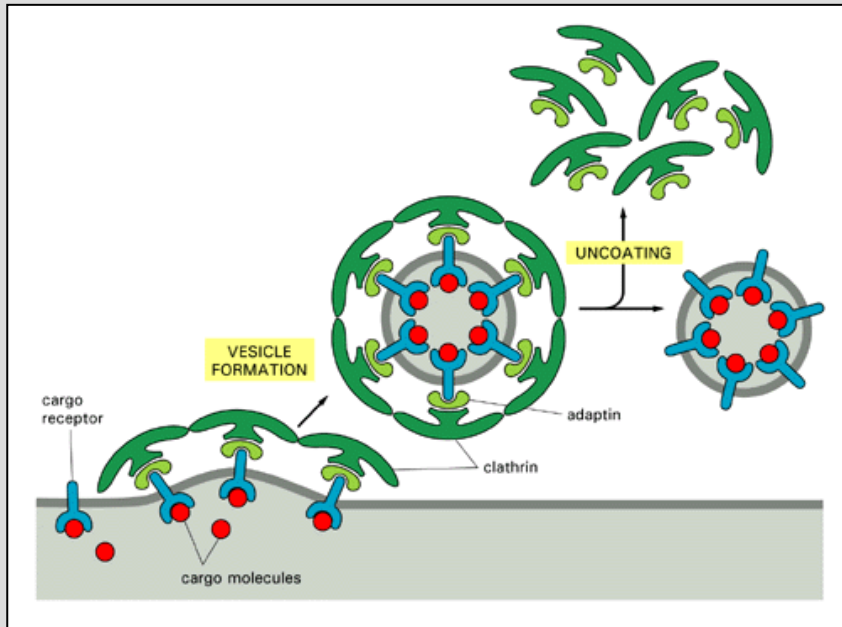
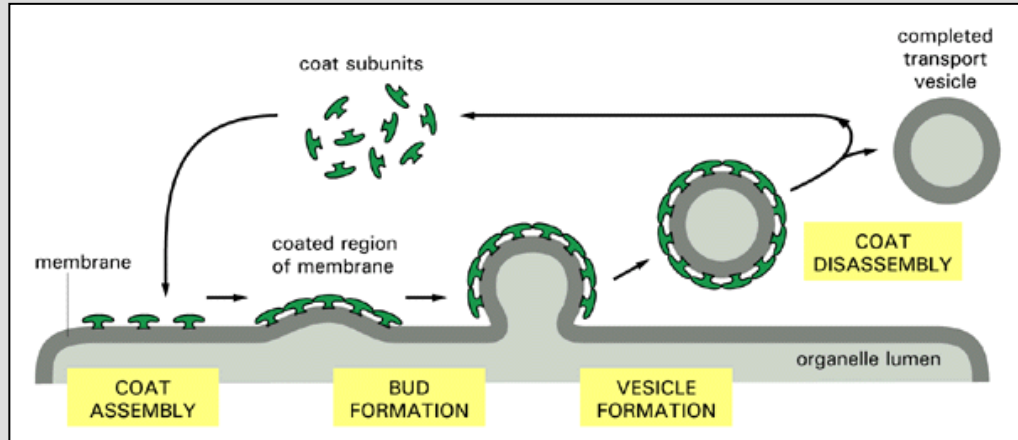
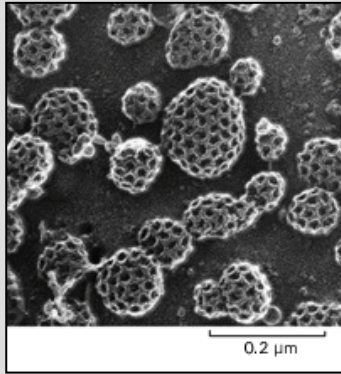


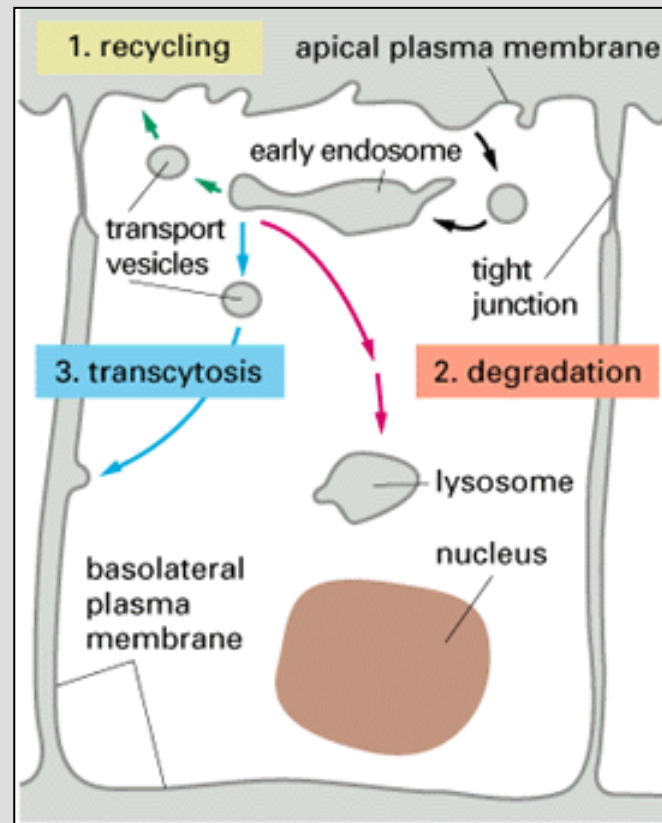
### DIVISION CELULAR



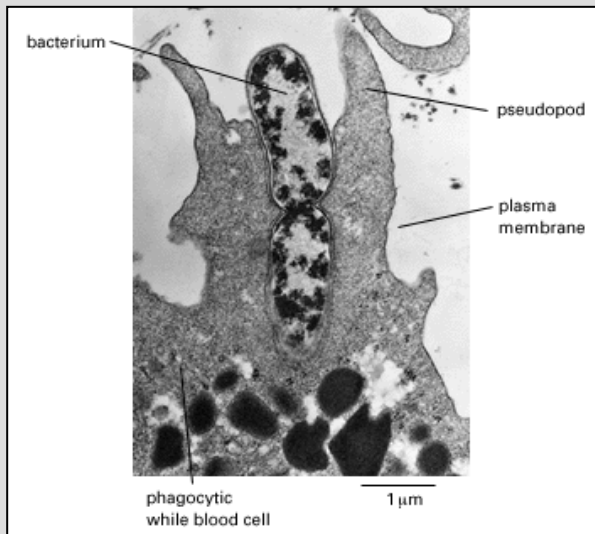
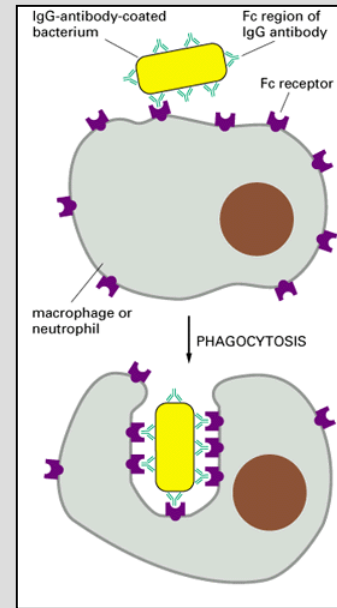
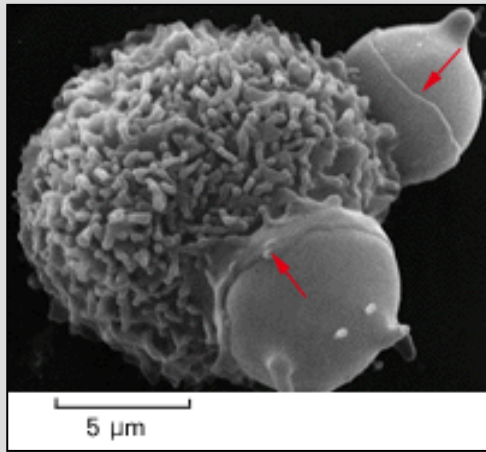


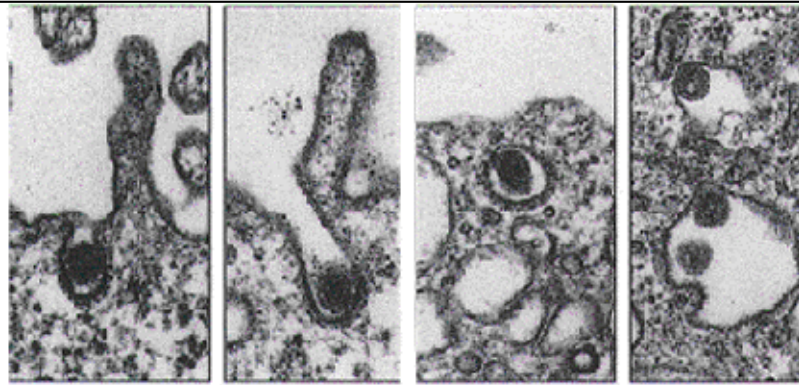






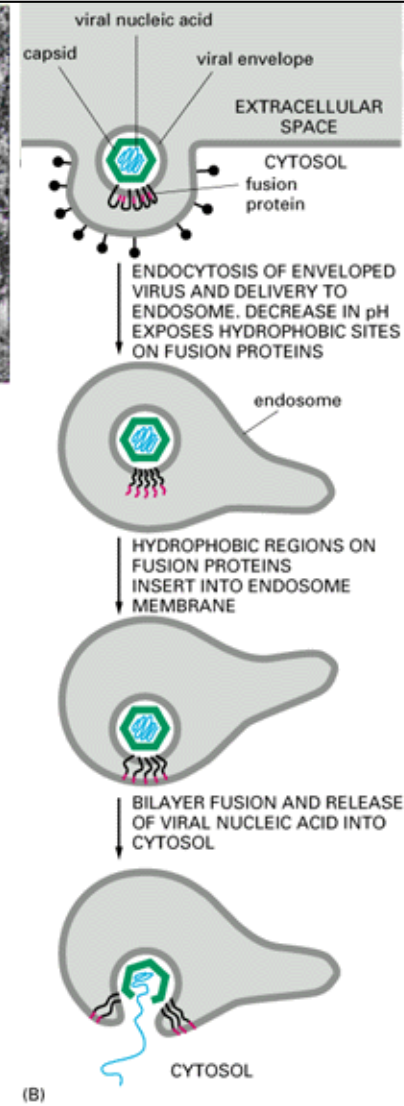


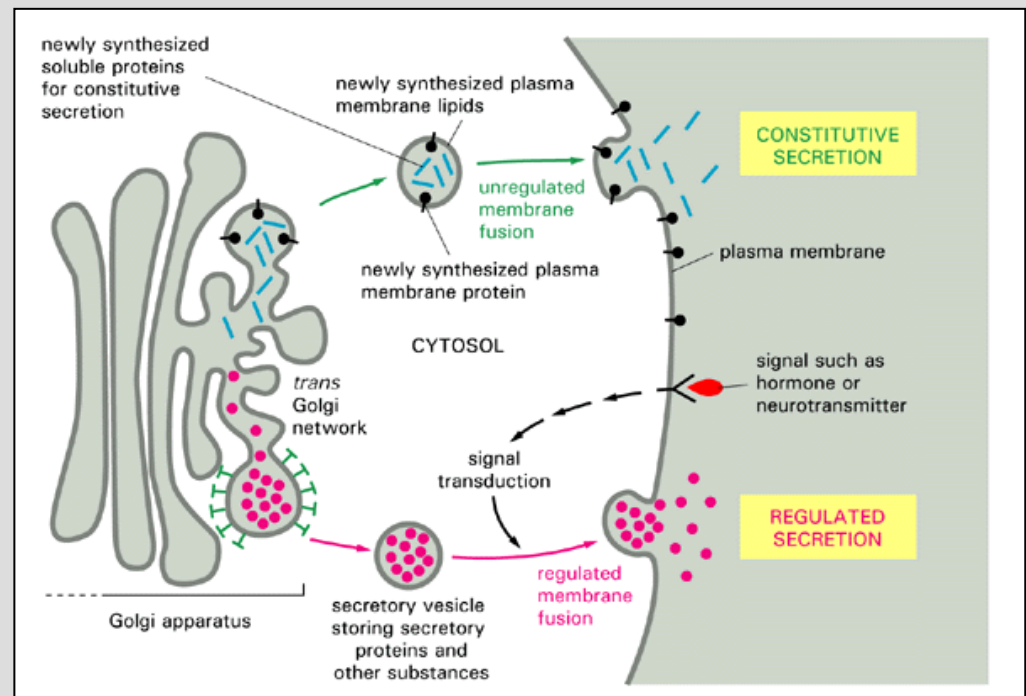
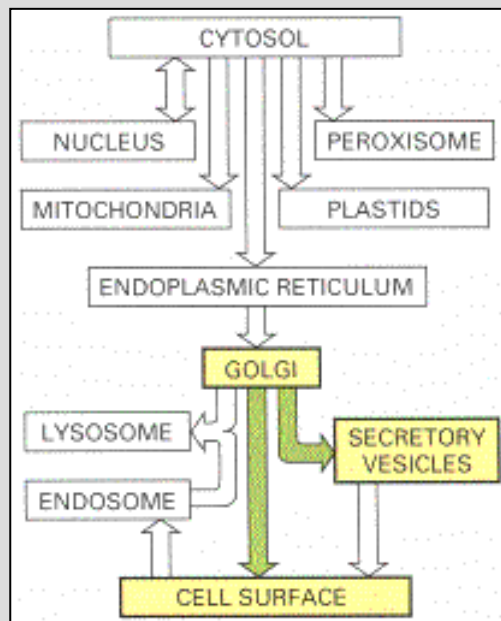
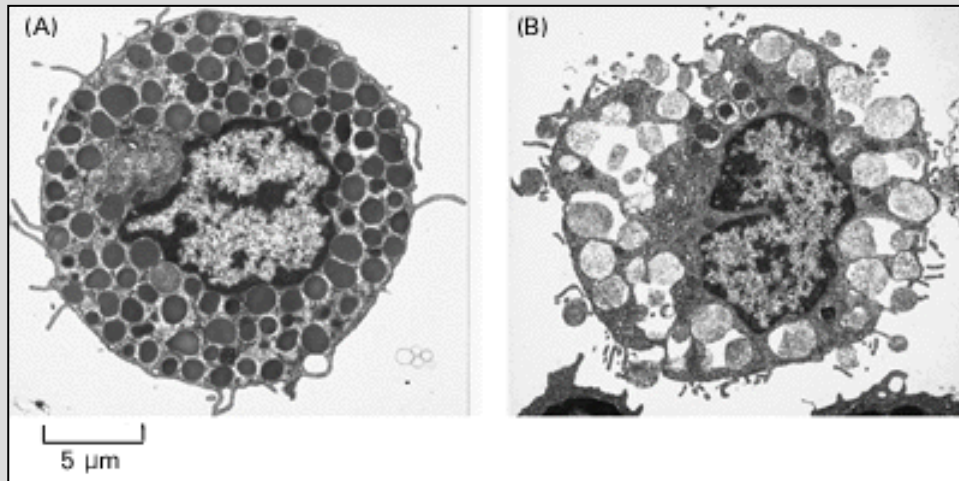


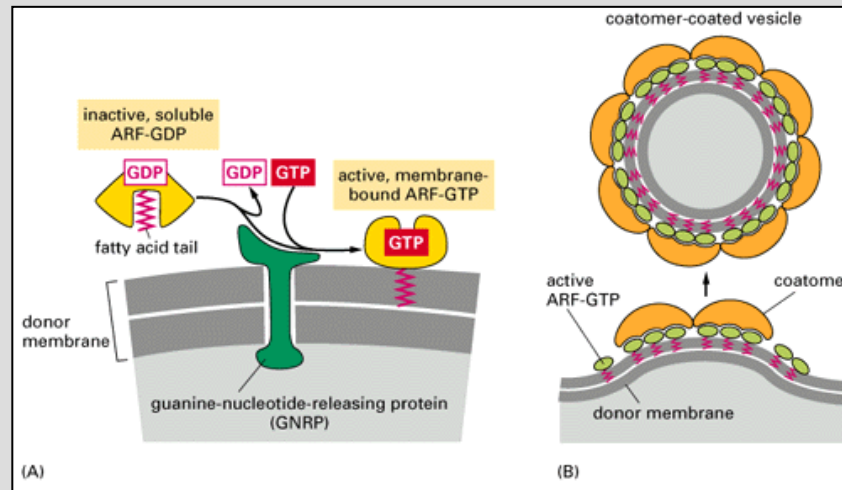
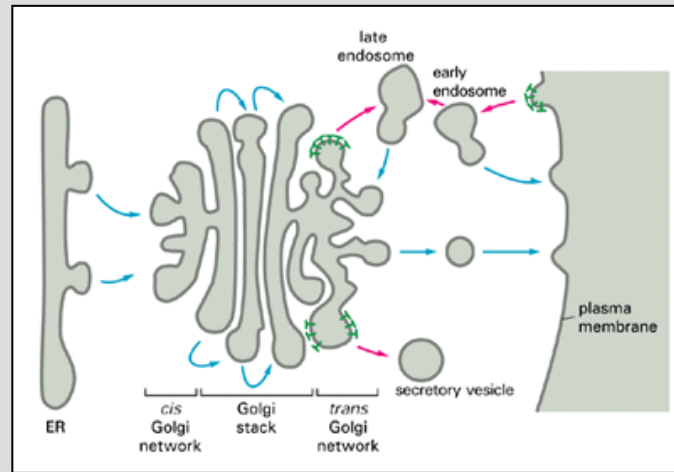


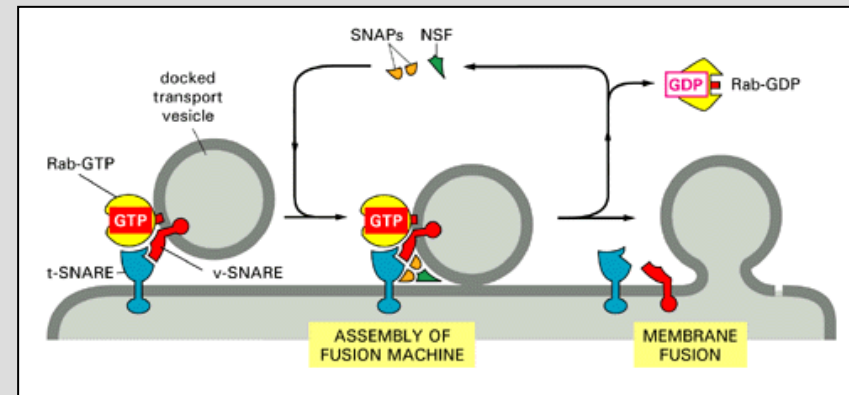
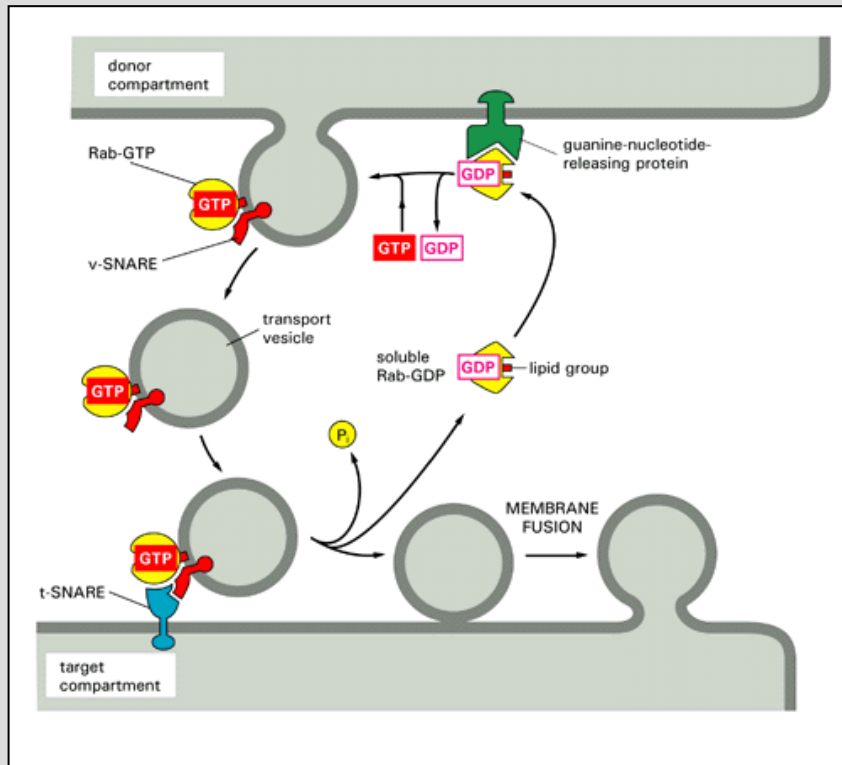
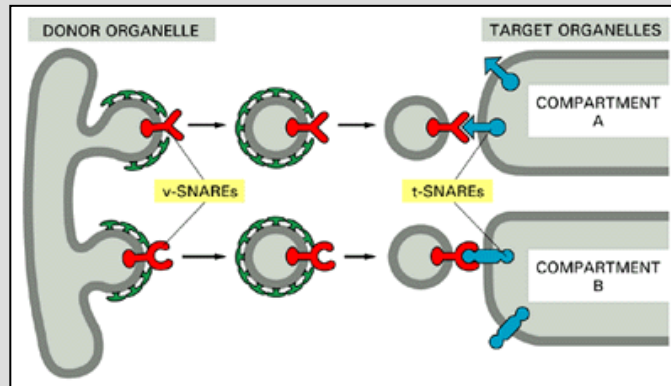
(A)

0.2  $\mu\text{m}$







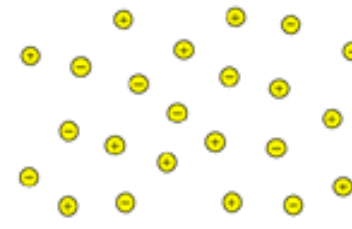
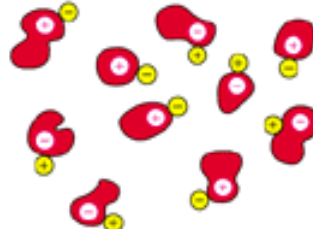
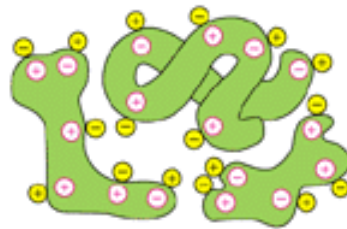


NSF: proteína de fusión sensible a N-etilmaleimida  
 SNAP: proteína de acoplamiento a NSF  
 SNARE: receptor de SNAP

Rab: GTPasa monomérica reconocida por la proteína liberadora de nucleótidos de guanina de la membrana dadora.



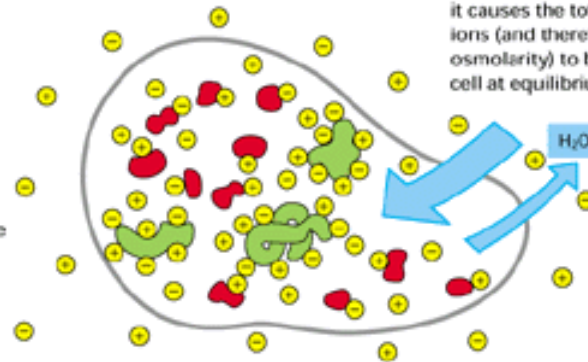
## SOURCES OF INTRACELLULAR OSMOLARITY



osmolality.

### THE PROBLEM

Because of the above factors, a cell that does nothing to control its osmolality will have a higher concentration of solutes inside than outside. As a result, water will be higher in concentration outside the cell than inside. This difference in water concentration across the plasma membrane will cause water to move continuously into the cell by **osmosis**, causing it to rupture.



it causes the total concentration of inorganic ions (and therefore their contribution to the osmolality) to be greater inside than outside the cell at equilibrium.

### THE SOLUTION

Animal cells and bacteria control their intracellular osmolality by actively pumping out inorganic ions, such as  $\text{Na}^+$ , so that their cytoplasm contains a lower total concentration of inorganic ions than the extracellular fluid, thereby compensating for their excess of organic solutes.

