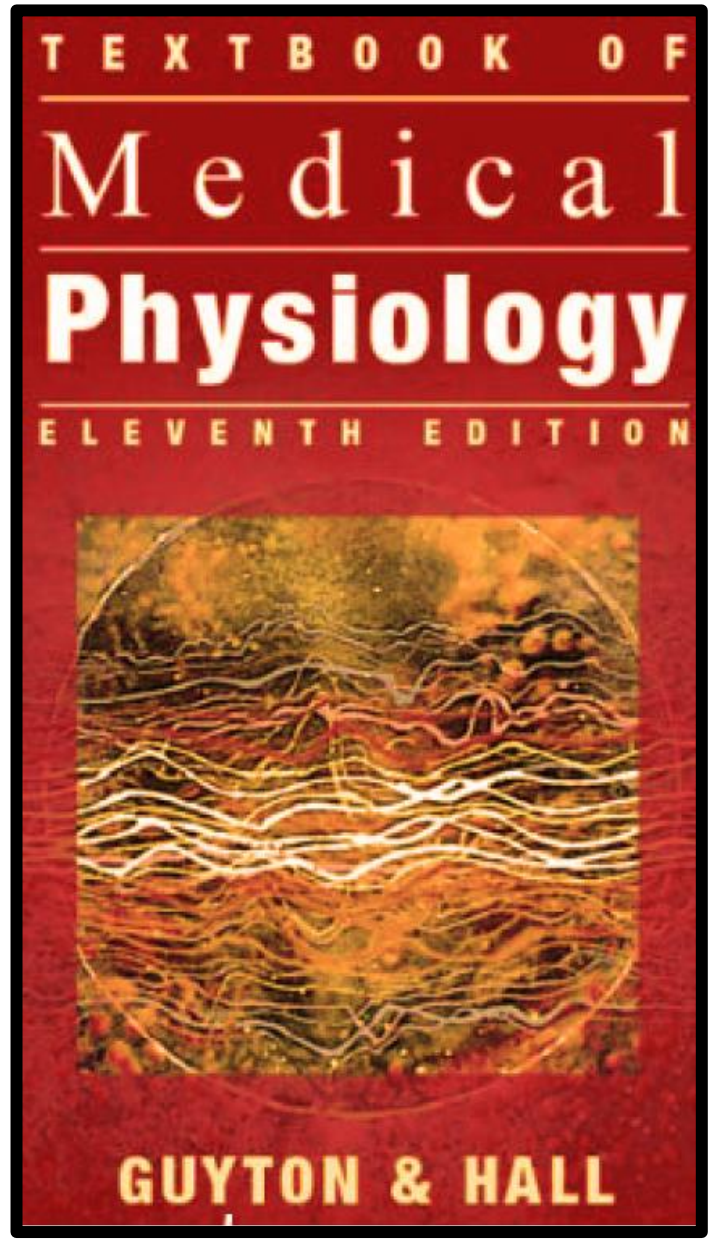
Neural Transmission
&
Neurophysics


TEXTBOOK OF
Medical
Physiology
ELEVENTH EDITION
GUYTON & HALL

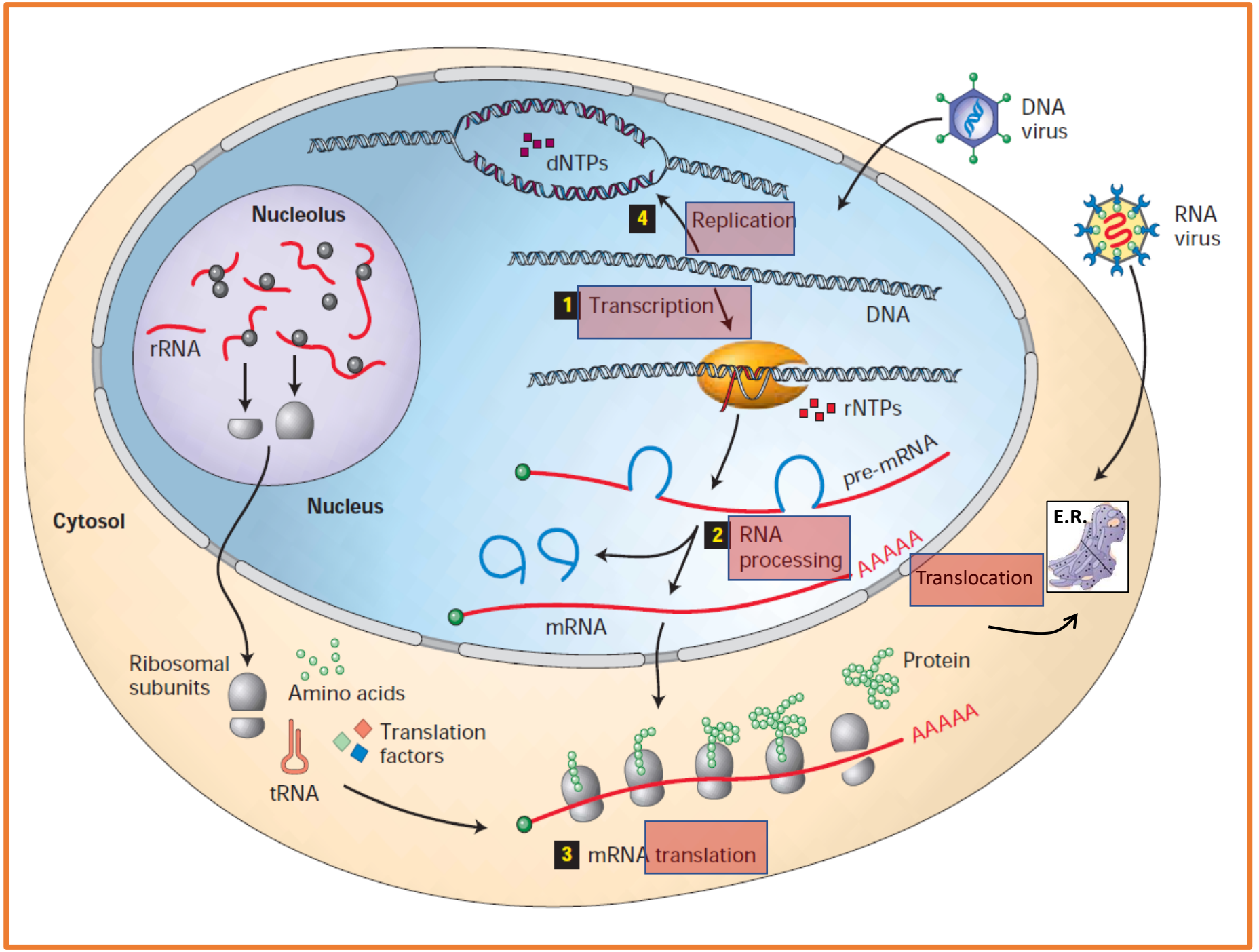
Basic Genetic Processes:

$R^2 T^4$

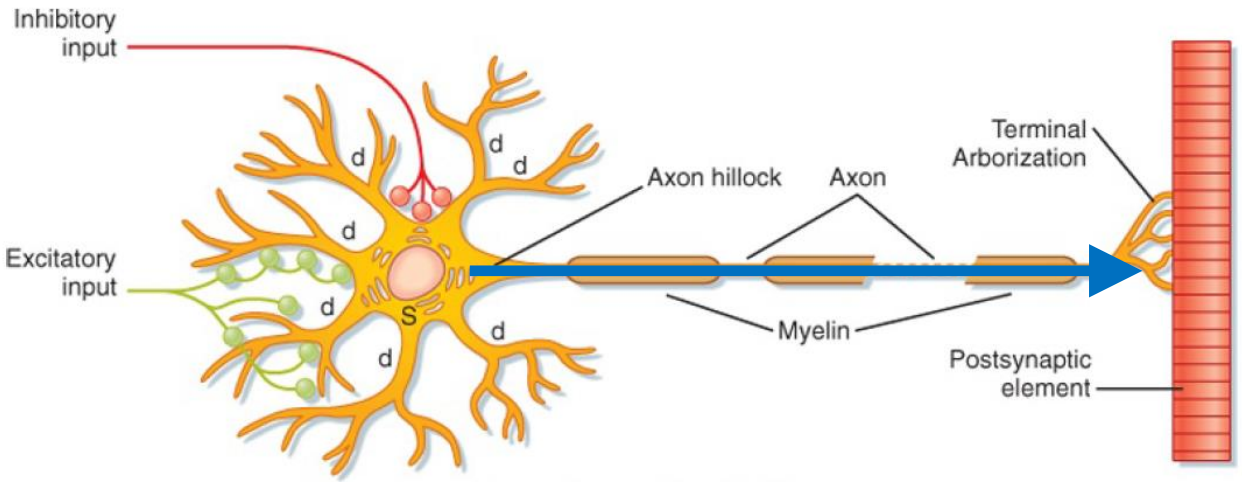
Replication of DNA
(during Cell Division)

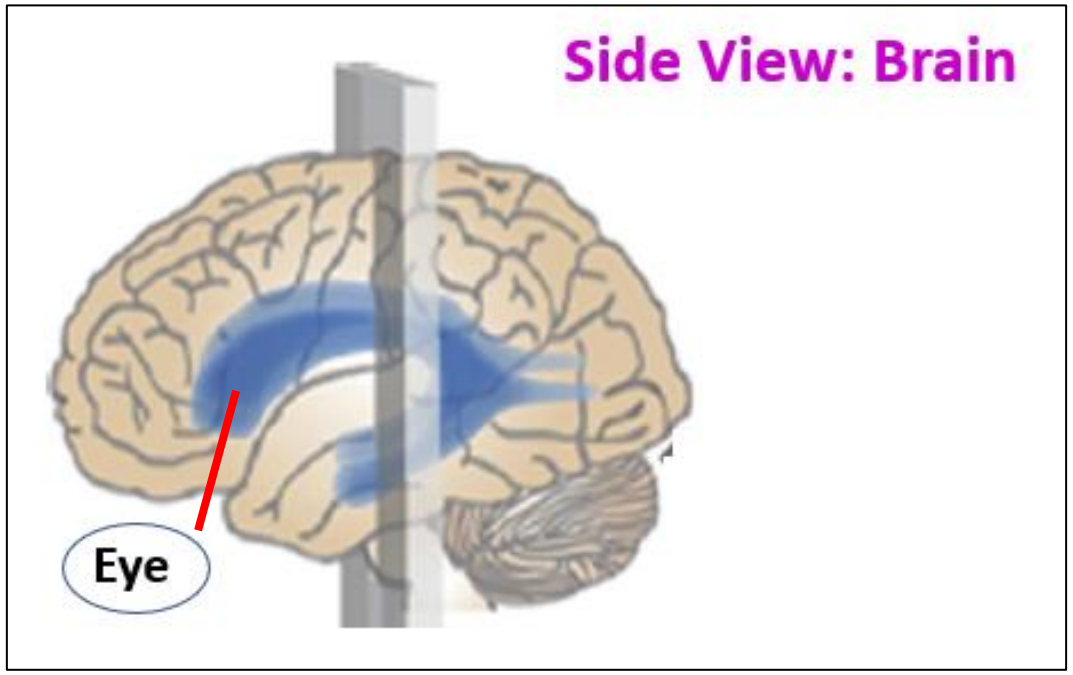
Protein Formation Steps:

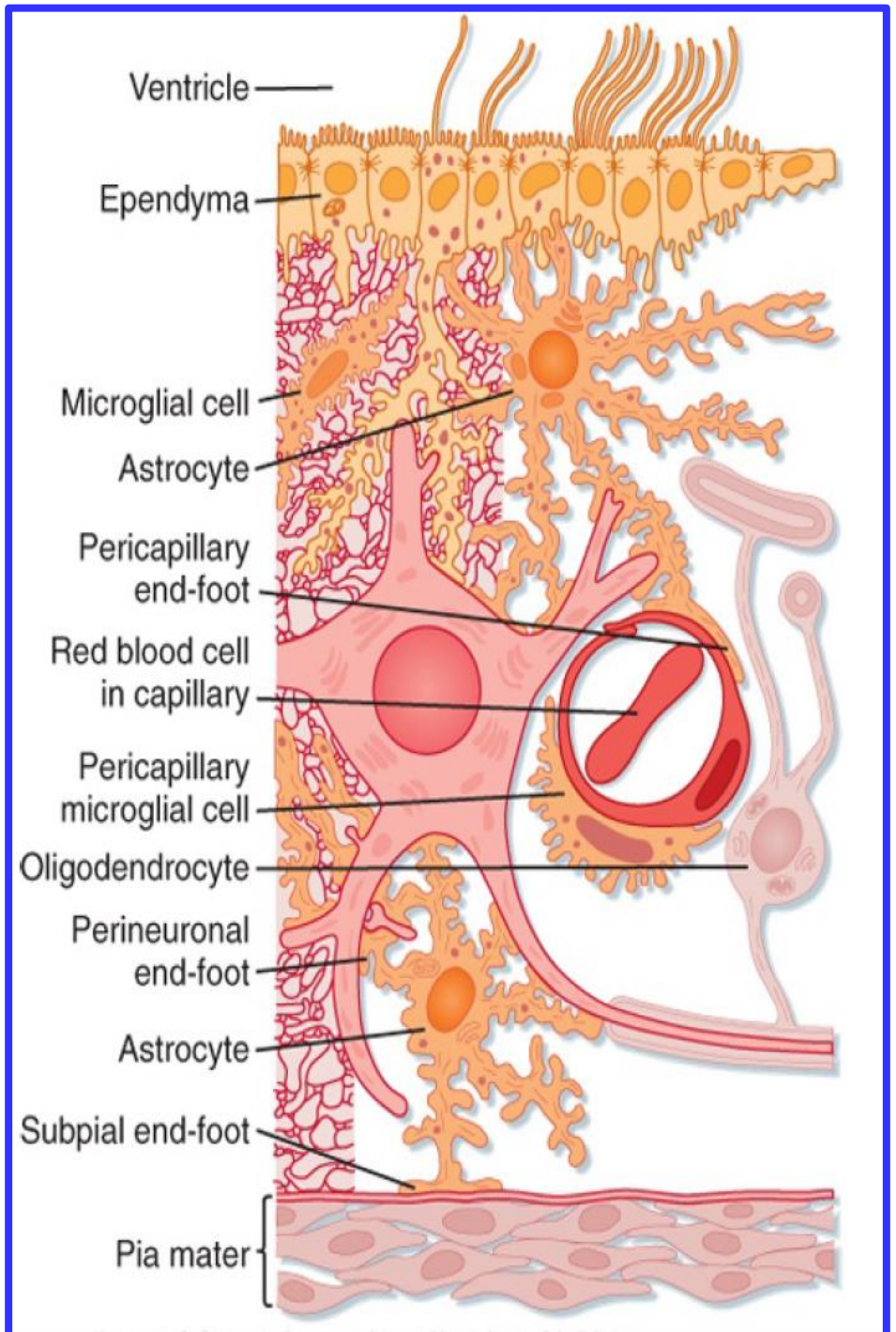
- Transcription,
- RNA processing,
- Transcription,
- Translocation



Neuron & Other Cells in Brain Tissue

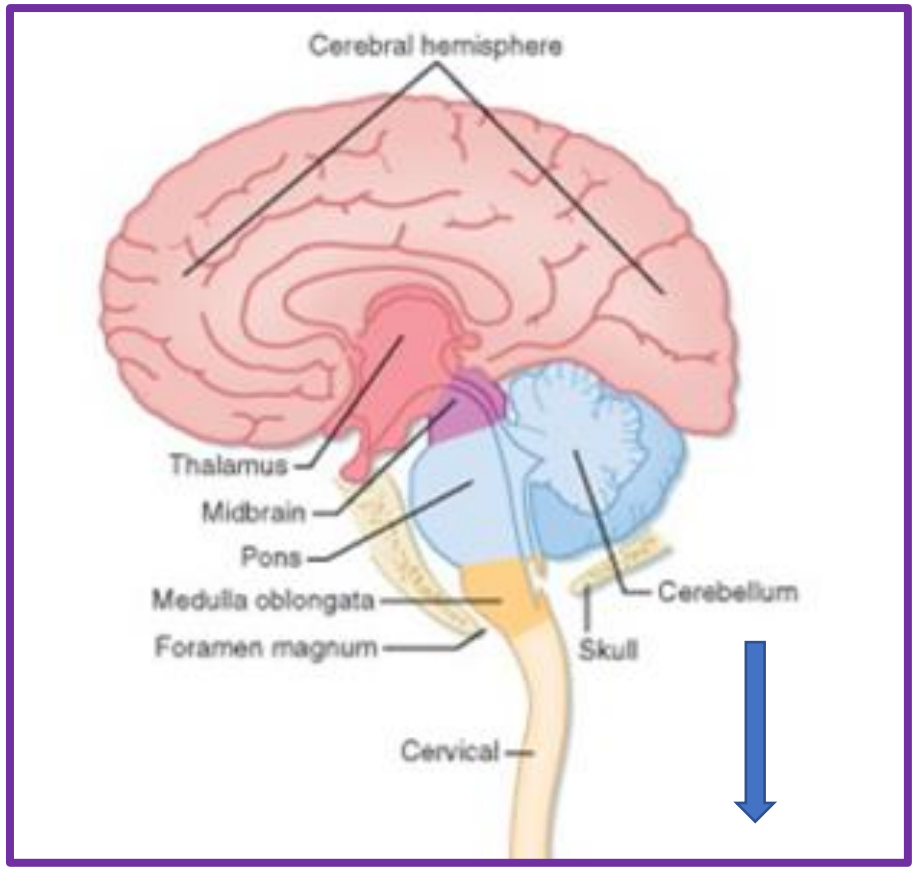


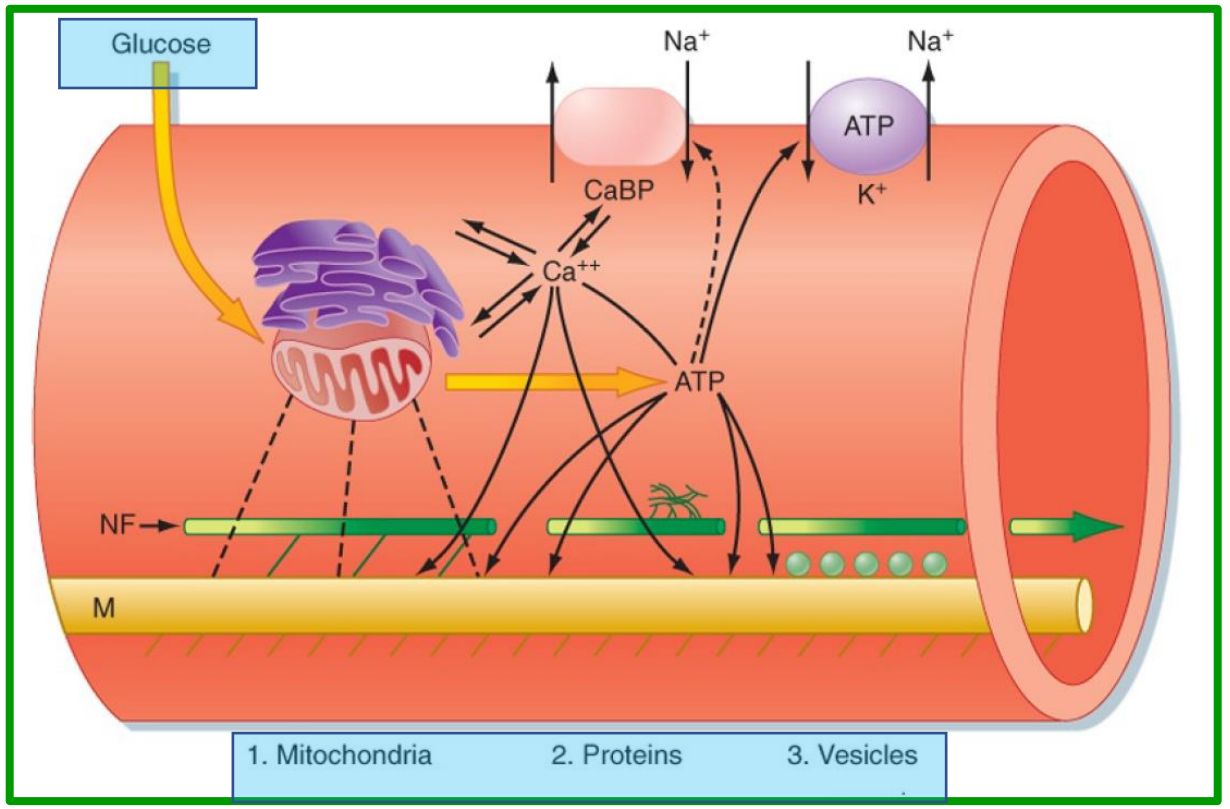




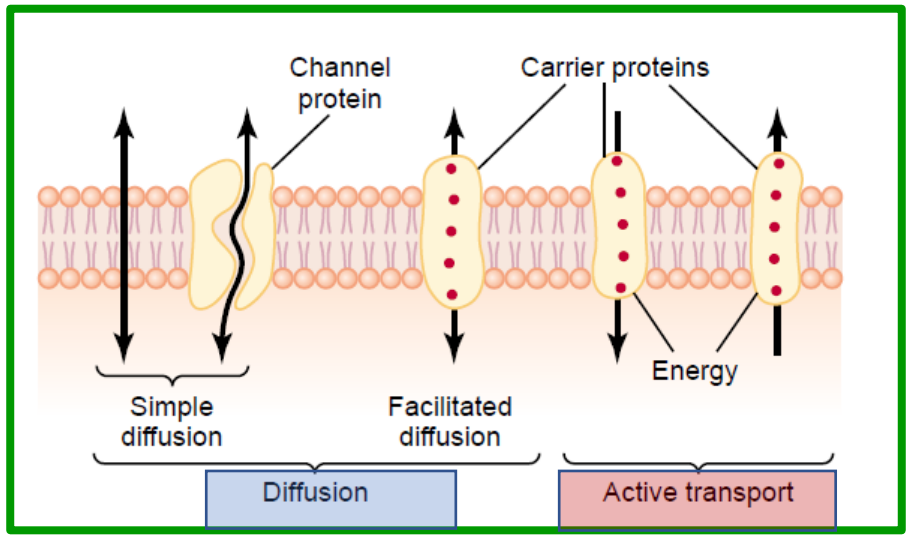
Neuronal Transmission

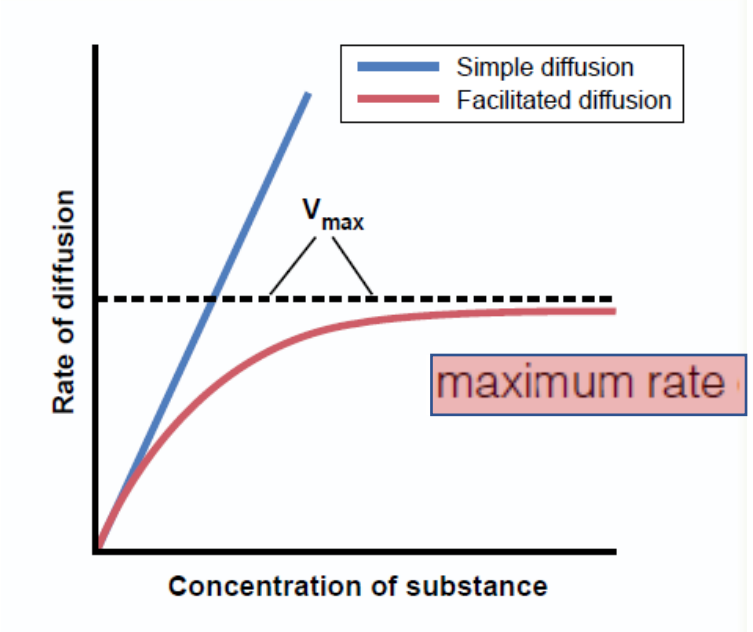
M: Micro-tubules
NF: Neuro-filaments



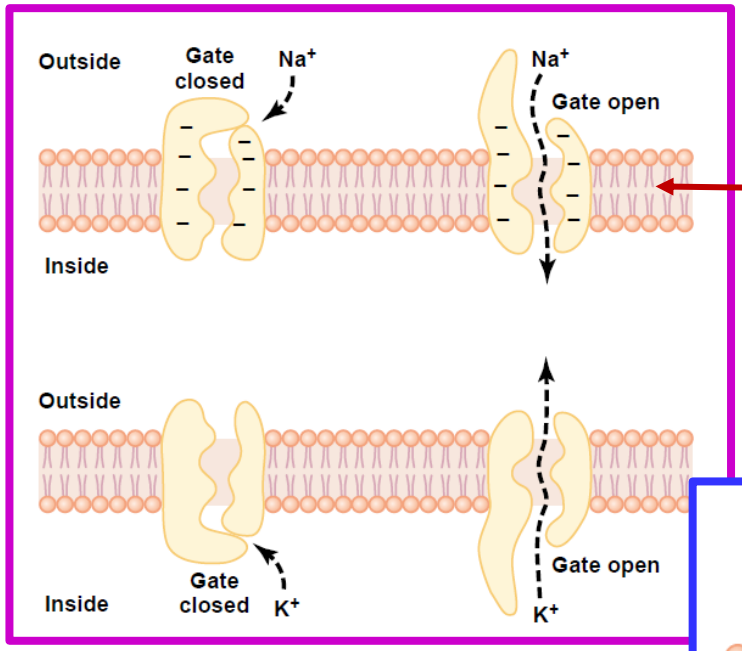


Transport pathways through the cell membrane



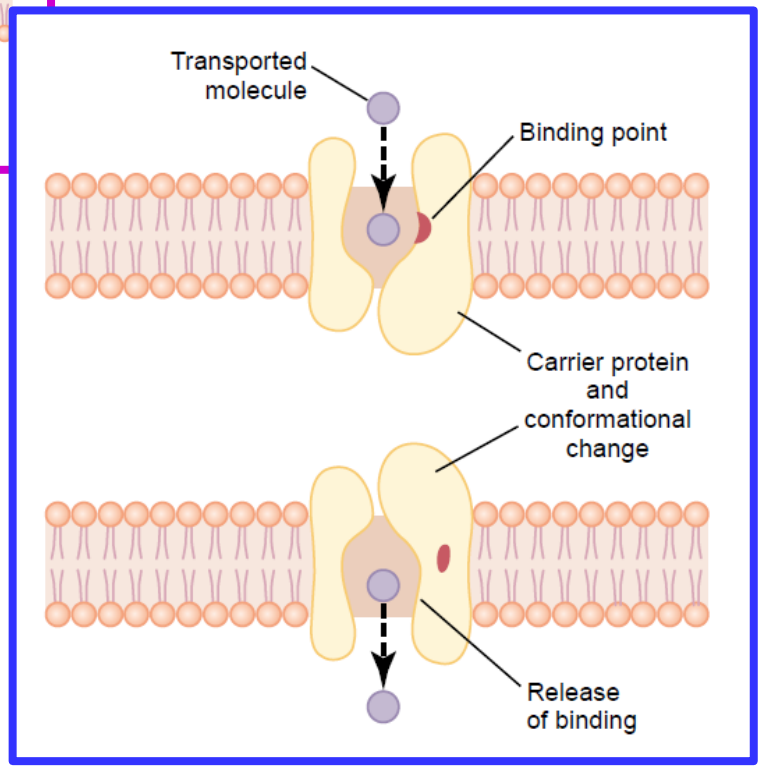


Transport of sodium and potassium ions through protein channels. conformational changes



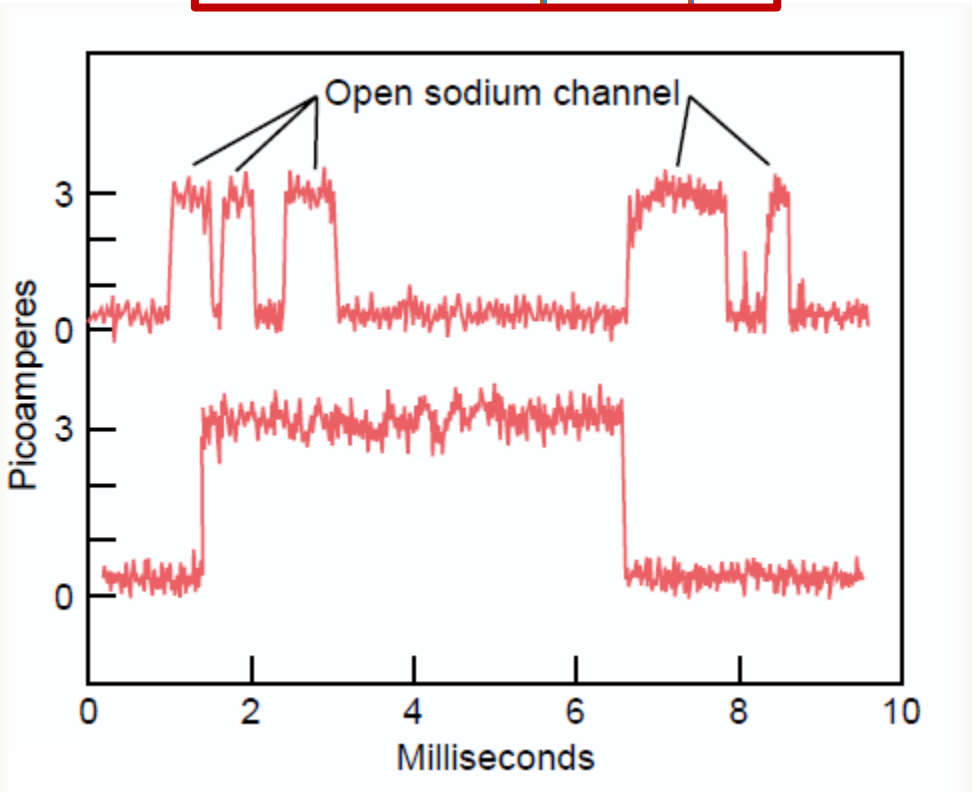
Bi-lamellar Cell Wall

facilitated diffusion



The "patch-clamp" method

"all or none" principle



Nernst equation:

$$\text{EMF (in millivolts)} = \pm 61 \log \frac{C_1}{C_2}$$