

EUKARYOTES

Structures in ALL Eukaryotic cells:

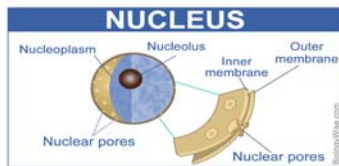
- Nucleus w/nucleolus
- Ribosomes
- ER (smooth & rough)
- Golgi apparatus w/vesicles
- Mitochondria
- Cytoskeleton

NUCLEUS

DNA is in the form of **chromatin**
(stringy DNA)



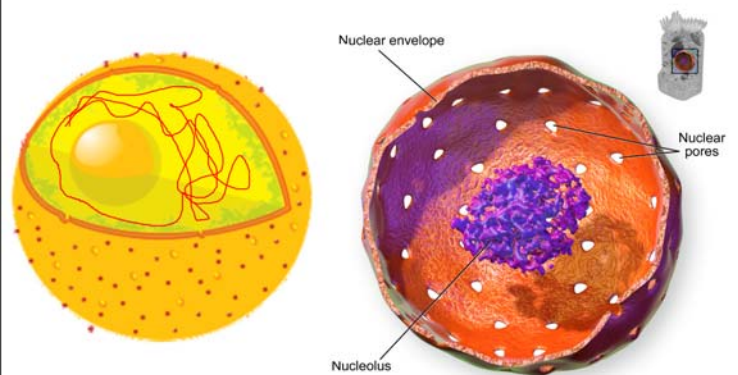
Nuclear Membrane = **Nuclear Envelope**
(2 phospholipid bi-layers)



Nuclear pores

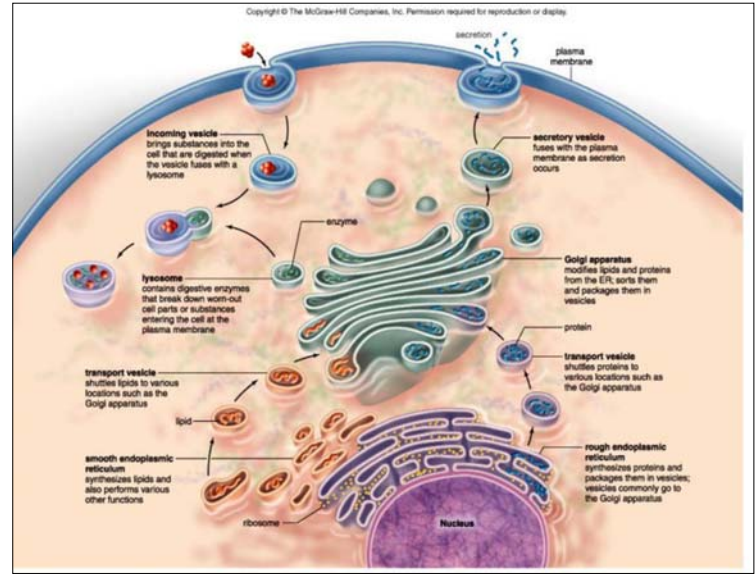
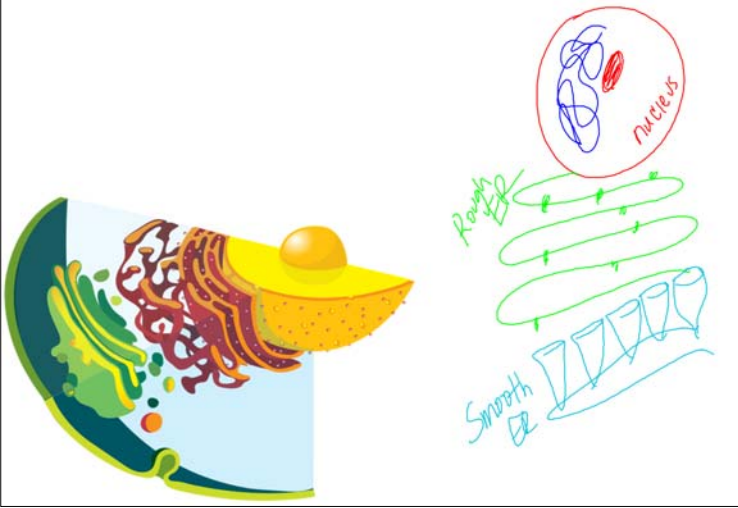
Allows ribosomes to move out to cytoplasm (free) or Rough ER (attached) **from nucleolus**

NUCLEUS



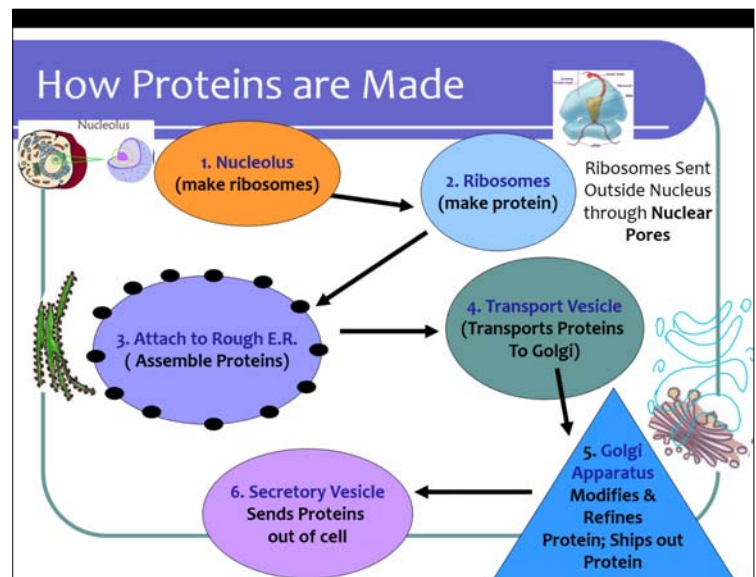
Nucleus

ROUGH & SMOOTH ER ATTACHED TO NUCLEUS



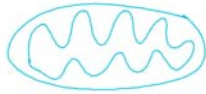
Making a Protein (in a cell)

- 1) Nucleolus makes ribosome
- 2) Ribosomes exit nucleus through nuclear pores
- 3) Ribosomes attach to Rough ER
- 4) Ribosomes Sent to Golgi Apparatus
- 5) Finished protein finds its destination via vesicles (vehicles)



CELLULAR RESPIRATION:

occurs in mitochondria (plants & animals)

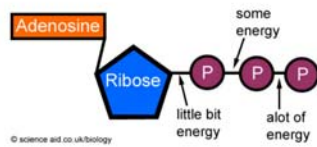
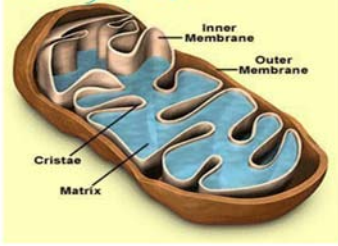


(Reactants) --> (Products)

(ENERGY!)



(Glucose) (Oxygen) water Carbon dioxide

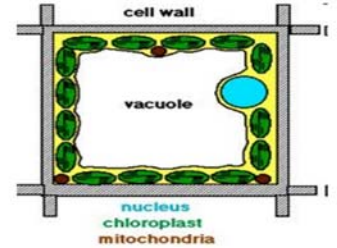


PHOTOSYNTHESIS:

occurs in Chloroplast (in plants)



(Reactants) --> (Products)



Cytoskeleton: Movement - Cilia & Flagella

- **Cilia:** Short hairs; used for movement
- **Flagella:** Long tail; used for movement

