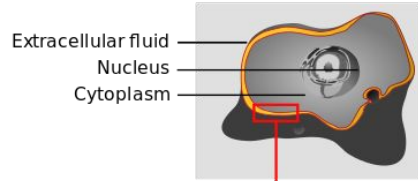
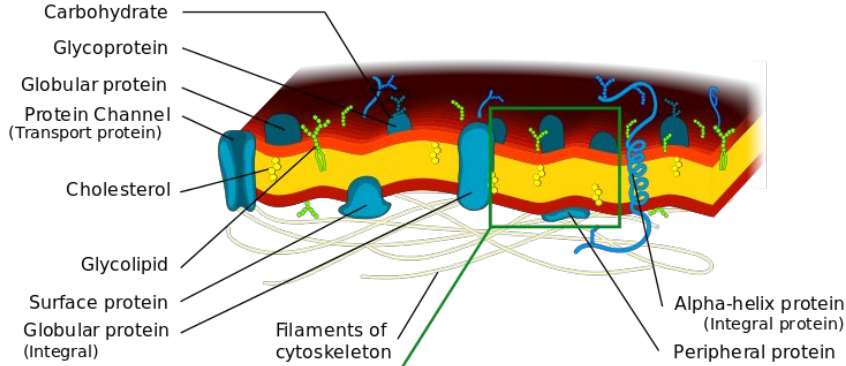


Cell Structures

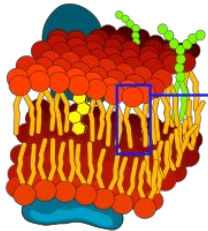
Cell



Cell membrane



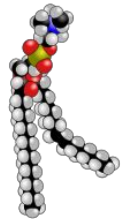
Phospholipid bilayer



Phospholipid
(Phosphatidylcholine)

Hydrophilic head

Hydrophobic tail

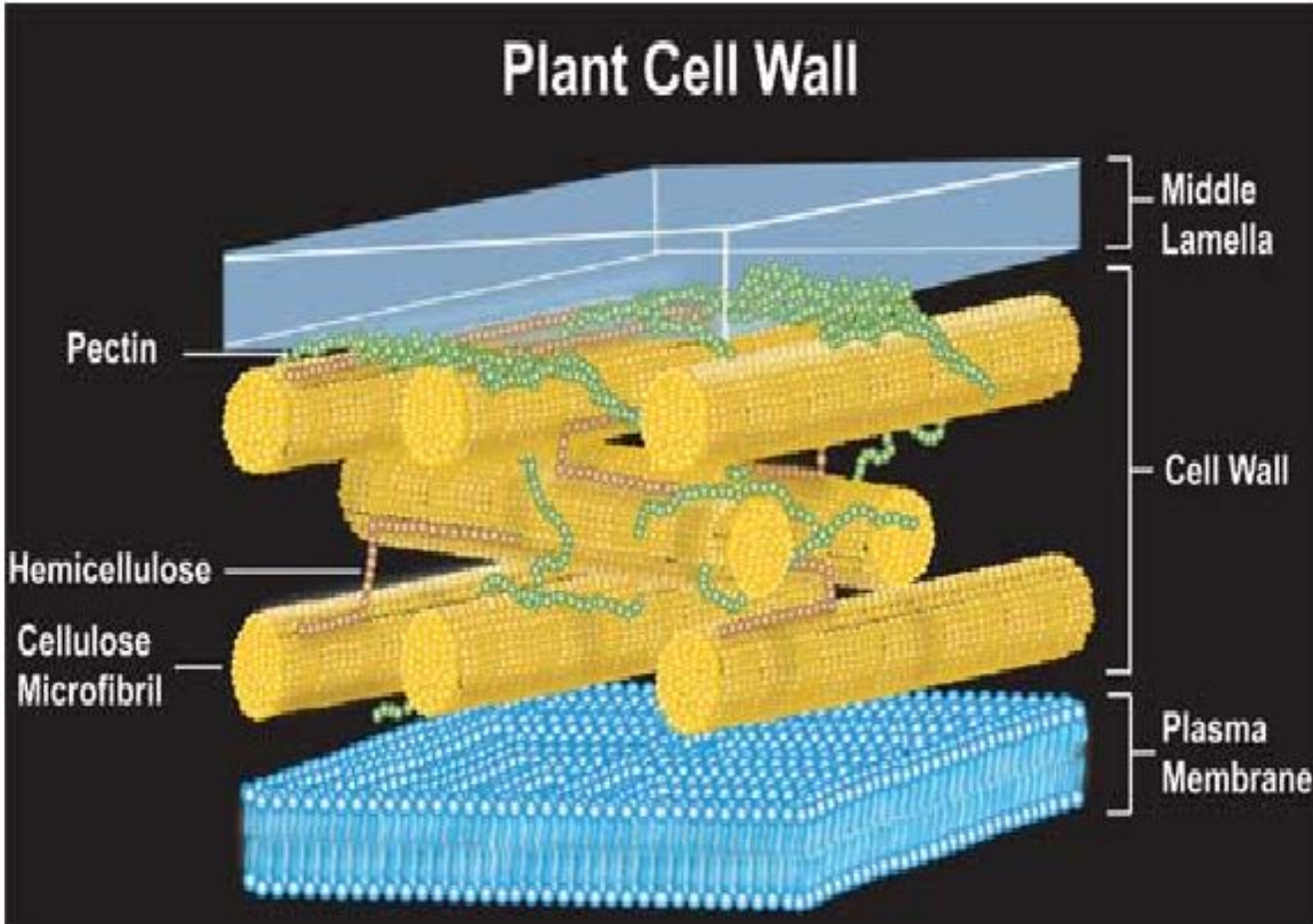


Cell Membrane = lipid bilayer

Hydrophilic = water loving
Hydrophobic = water fearing

Job: controls what moves into
and out of the cell.

Cell Wall = structure and support

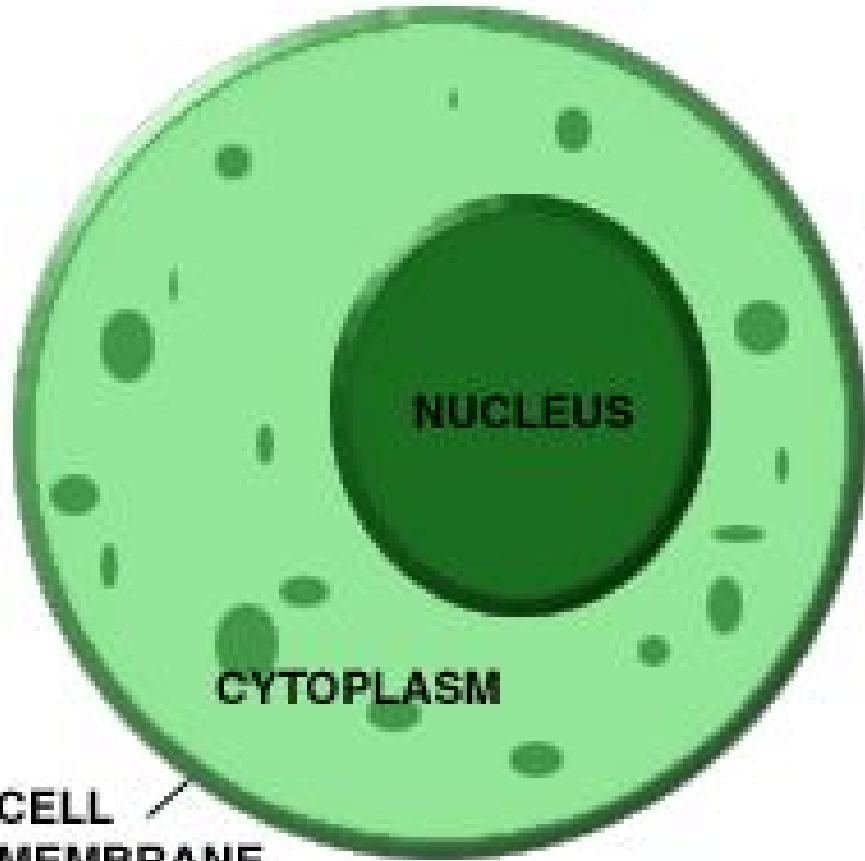


*found in:

- prokaryotes
- plants
- algae
- fungi

*made of tough polysaccharides (carbohydrates) like **cellulose** or **chitin**

Cytoplasm = Cell Goo (80% water)

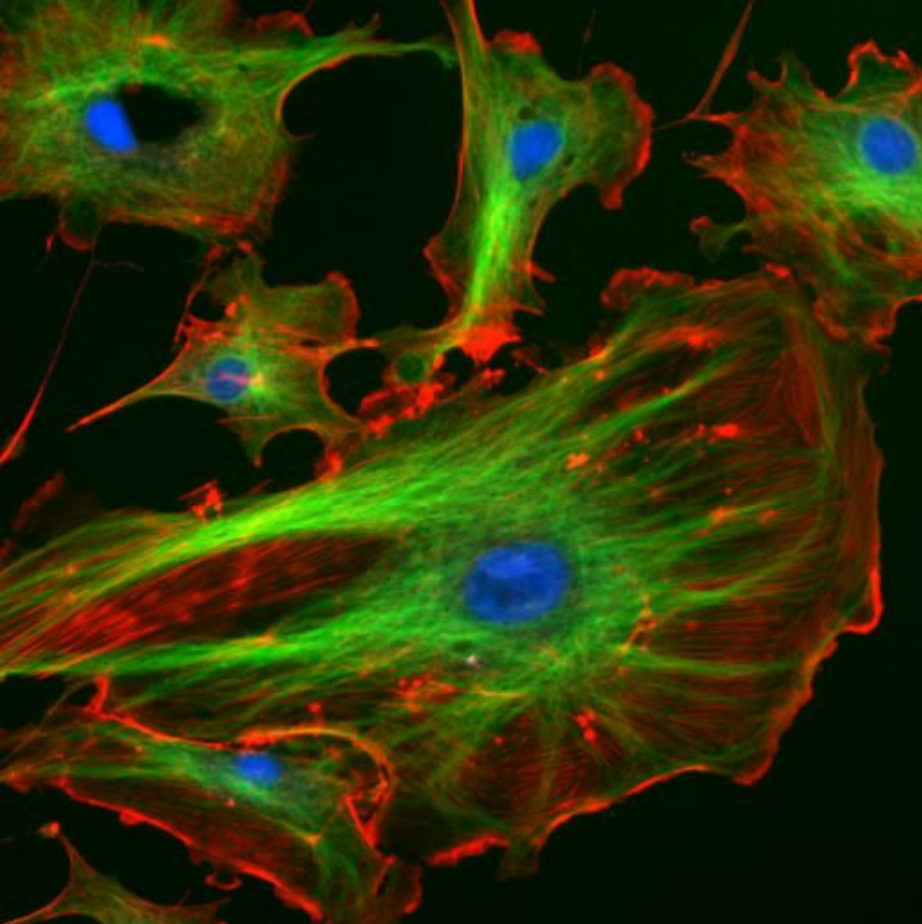


*material that holds all the stuff in all cells

*cushions the organelles

*has lots of dissolved carbohydrates and proteins that move around in it

Cytoskeleton = shape and organization

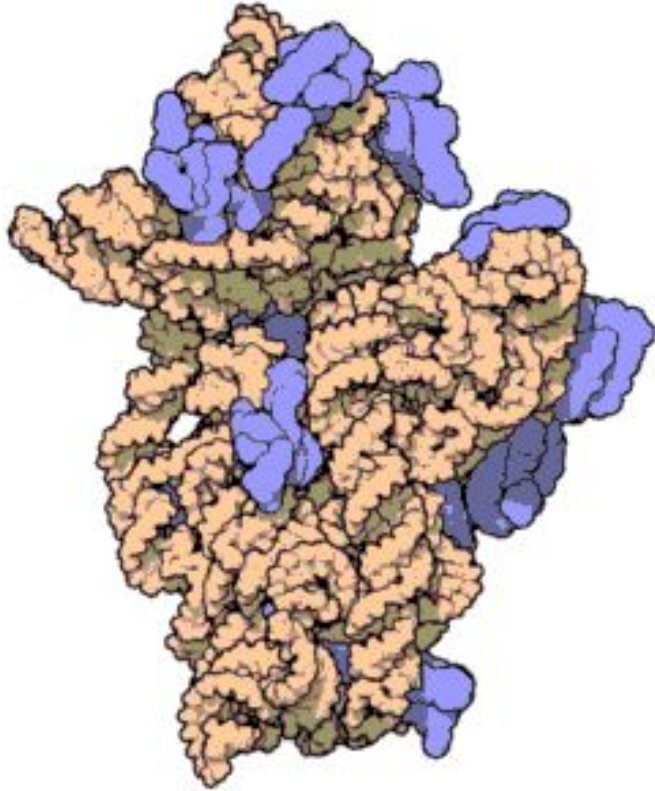


- *Networks of protein filaments in all cells

- *give shape and support to the cell

- *act like highways for transporting materials around the cell

Ribosomes = protein factories



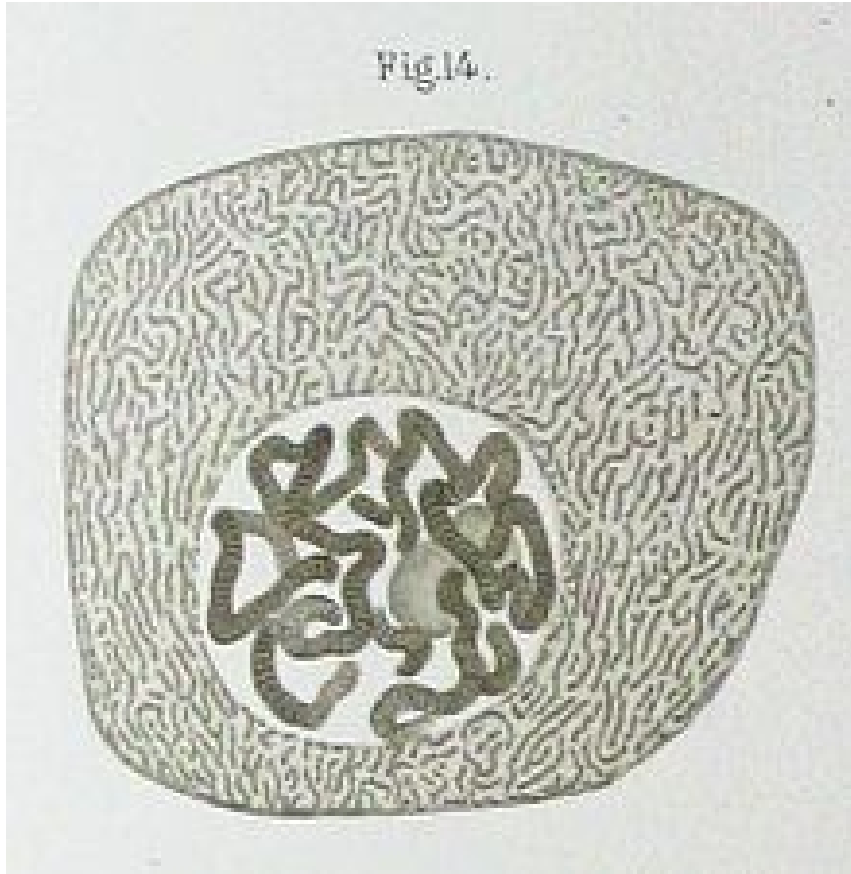
*protein+RNA machines that assemble new proteins (using instructions from the nucleus)

*can be found floating in cytoplasm in all cells, or as part of the Endoplasmic Reticulum in Eukaryotes.

Organelles

Structures that
form specific
functions in a
cell.

Nucleus = command center



- *holds all the Chromosomes (DNA) in Eukaryotic cells

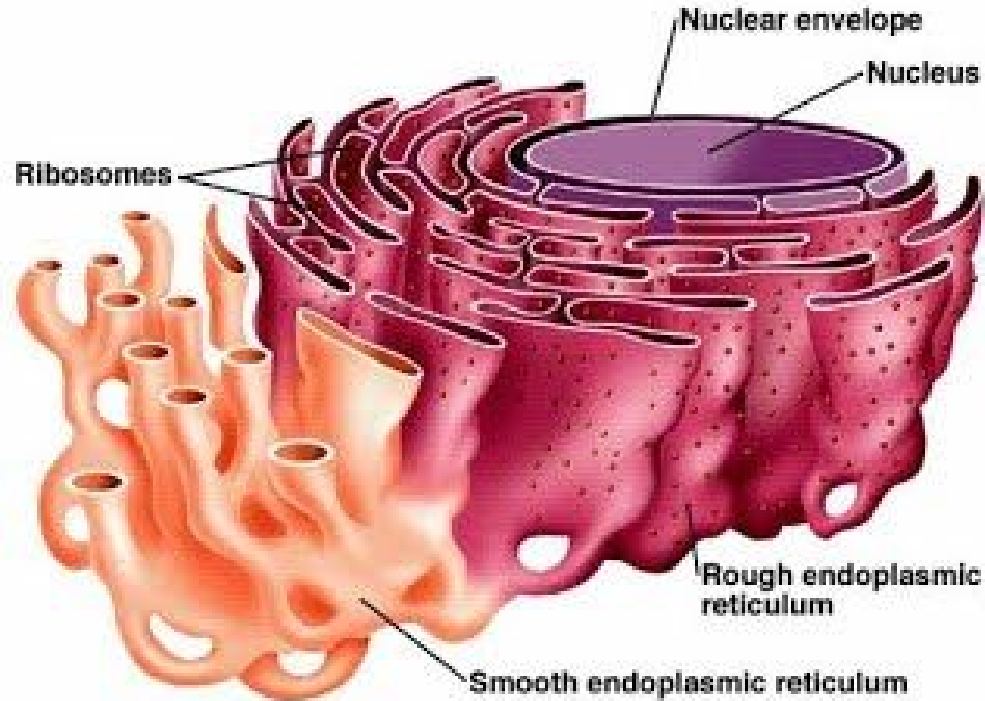
- *has a porous double membrane, allowing messages to go in and out

Endoplasmic Reticulum: rough and smooth

*internal membrane system

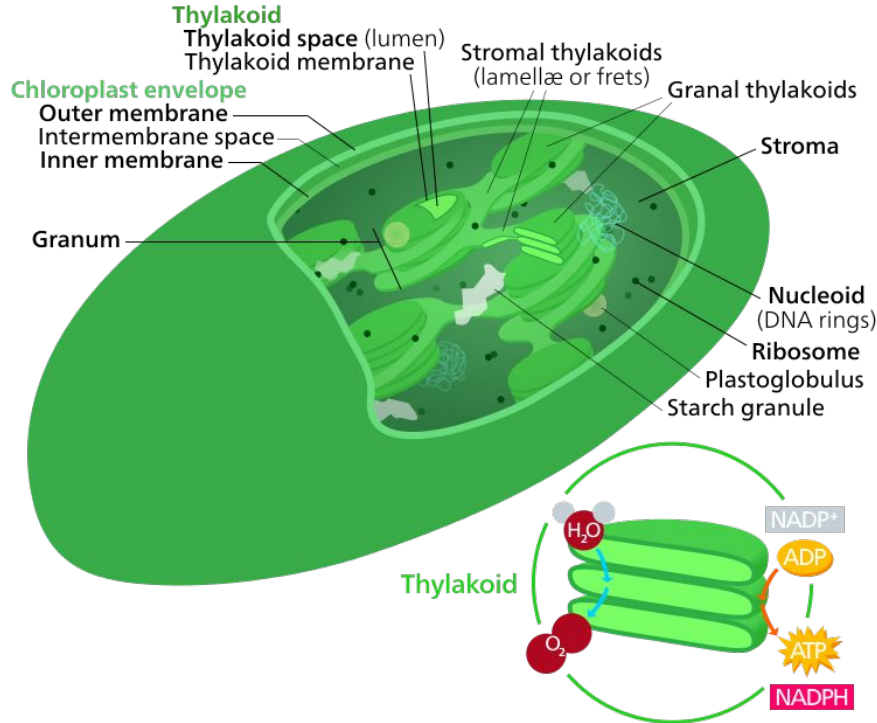
*Rough ER is covered with ribosomes and manufactures proteins that will stay in the cell membrane or be released from the cell

*Smooth ER manufactures membrane lipids and hormones



Chloroplasts = solar energy converters

the chloroplast

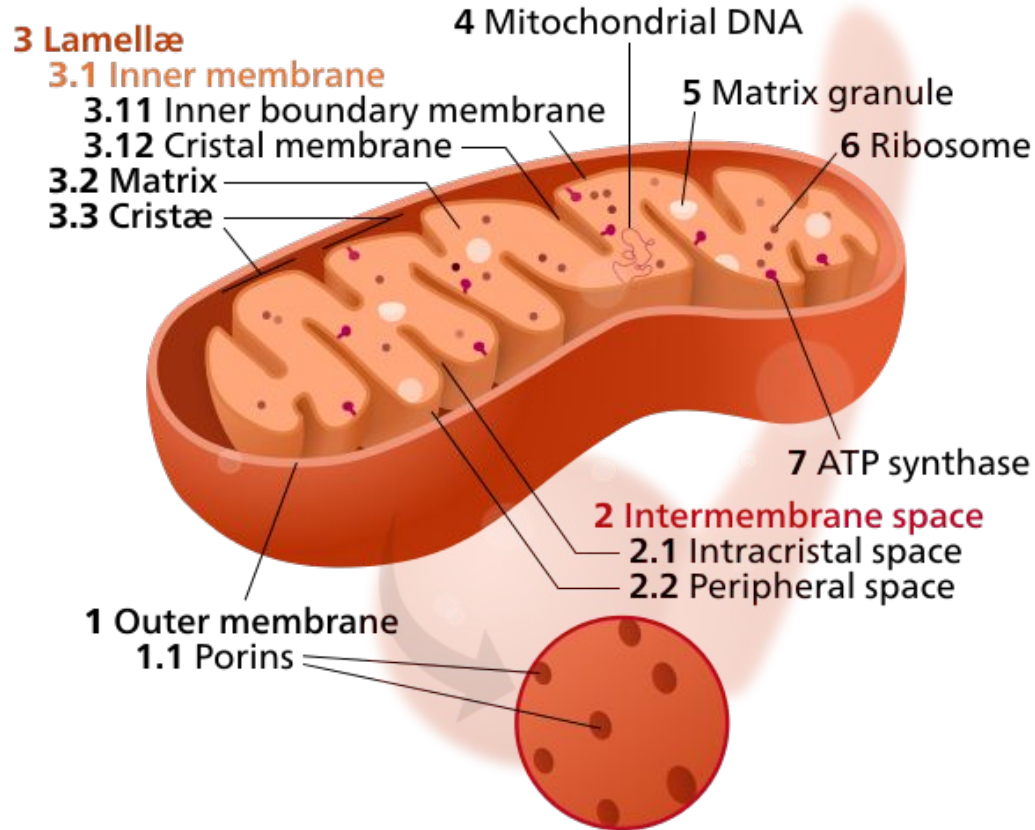


*capture energy from sunlight and convert it into chemical energy in food (photosynthesis!)

*found in plants, algae, and some bacteria

*has a double membrane and has its own DNA!

Mitochondria = power plants



*convert chemical energy from food into compounds the cells can easily use

*found in all Eukaryotes

*has a double membrane and has its own DNA!



Cells-R-Us is hiring!

Are you a cell structure looking for an exciting new career opportunity? Come join us at Cells-R-Us! We are hiring for all positions.

To apply, please complete a job application, and be sure to attach a recent cell-fie (photograph of yourself). Please return completed applications to the collection tray by Tuesday, November 14th to ensure you are considered for the position.

We look forward to hearing from you!