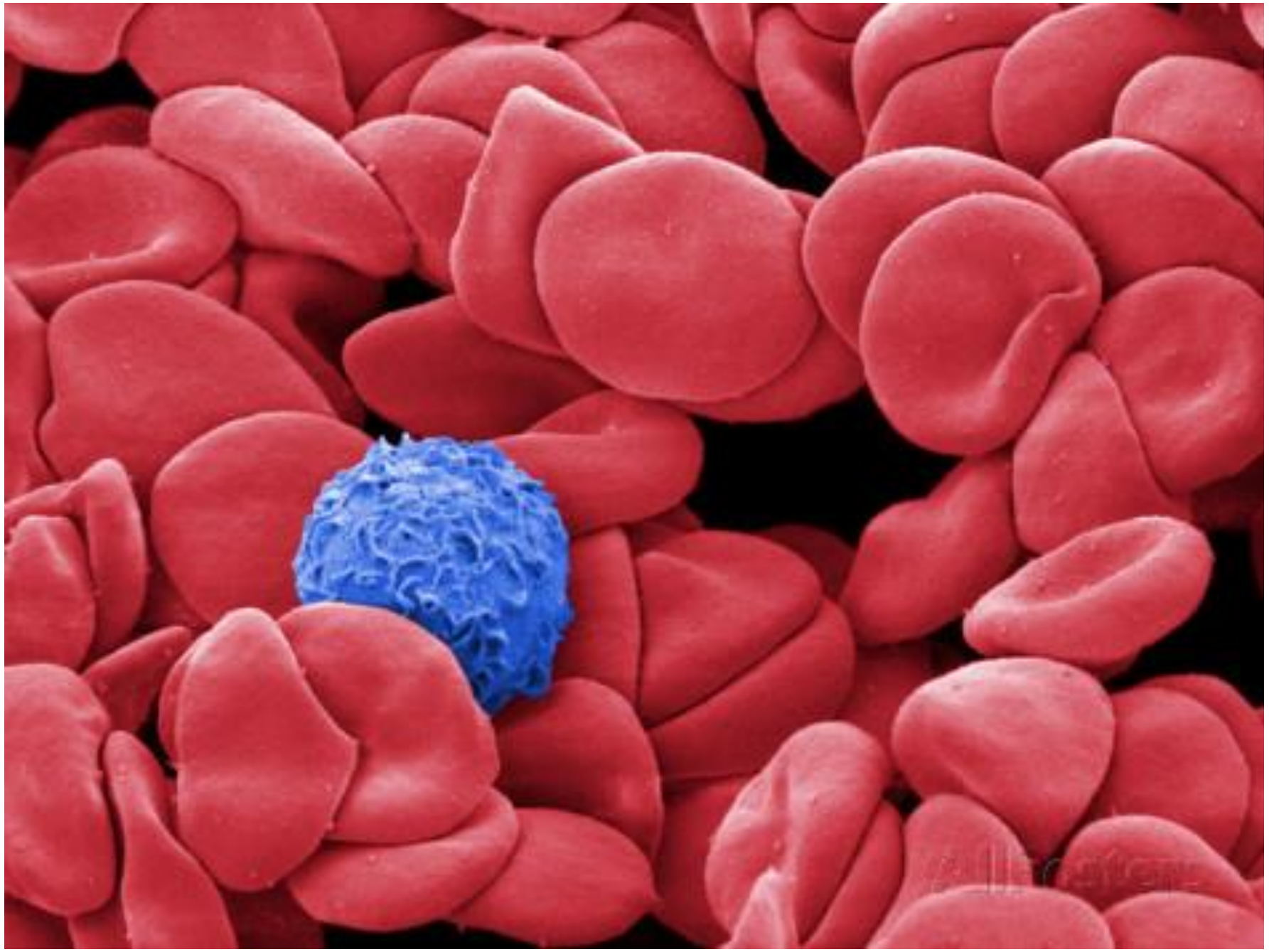
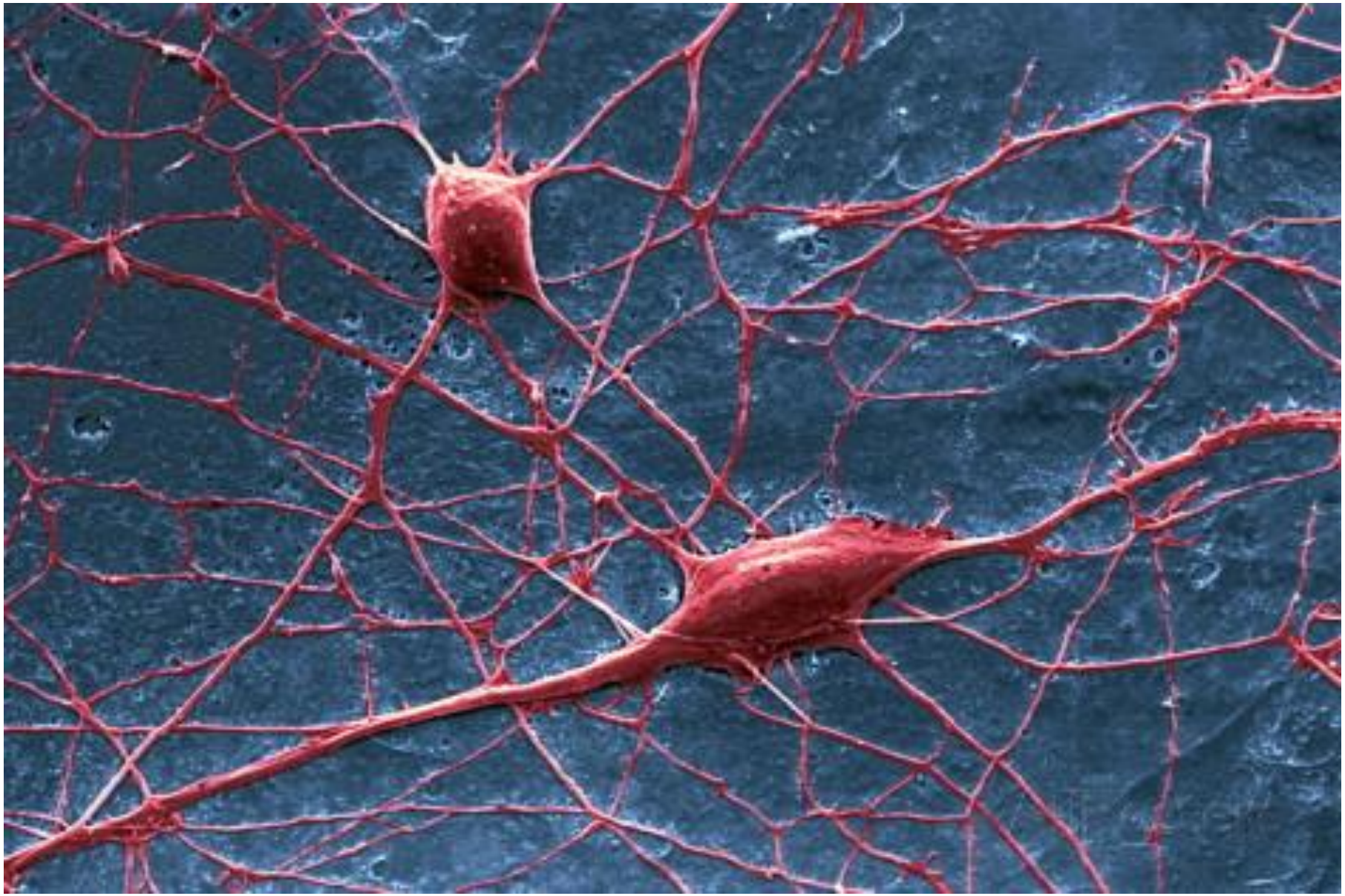
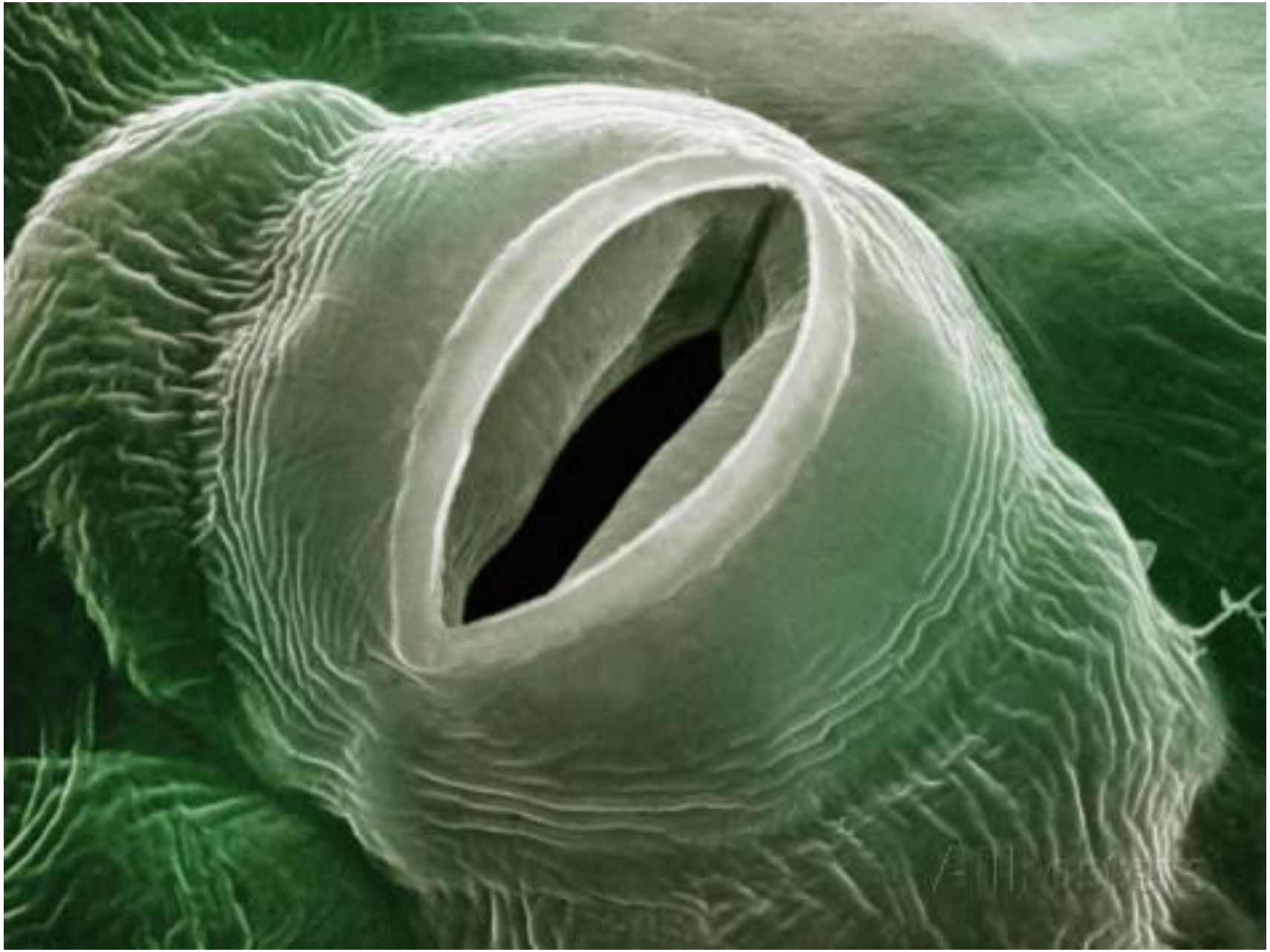
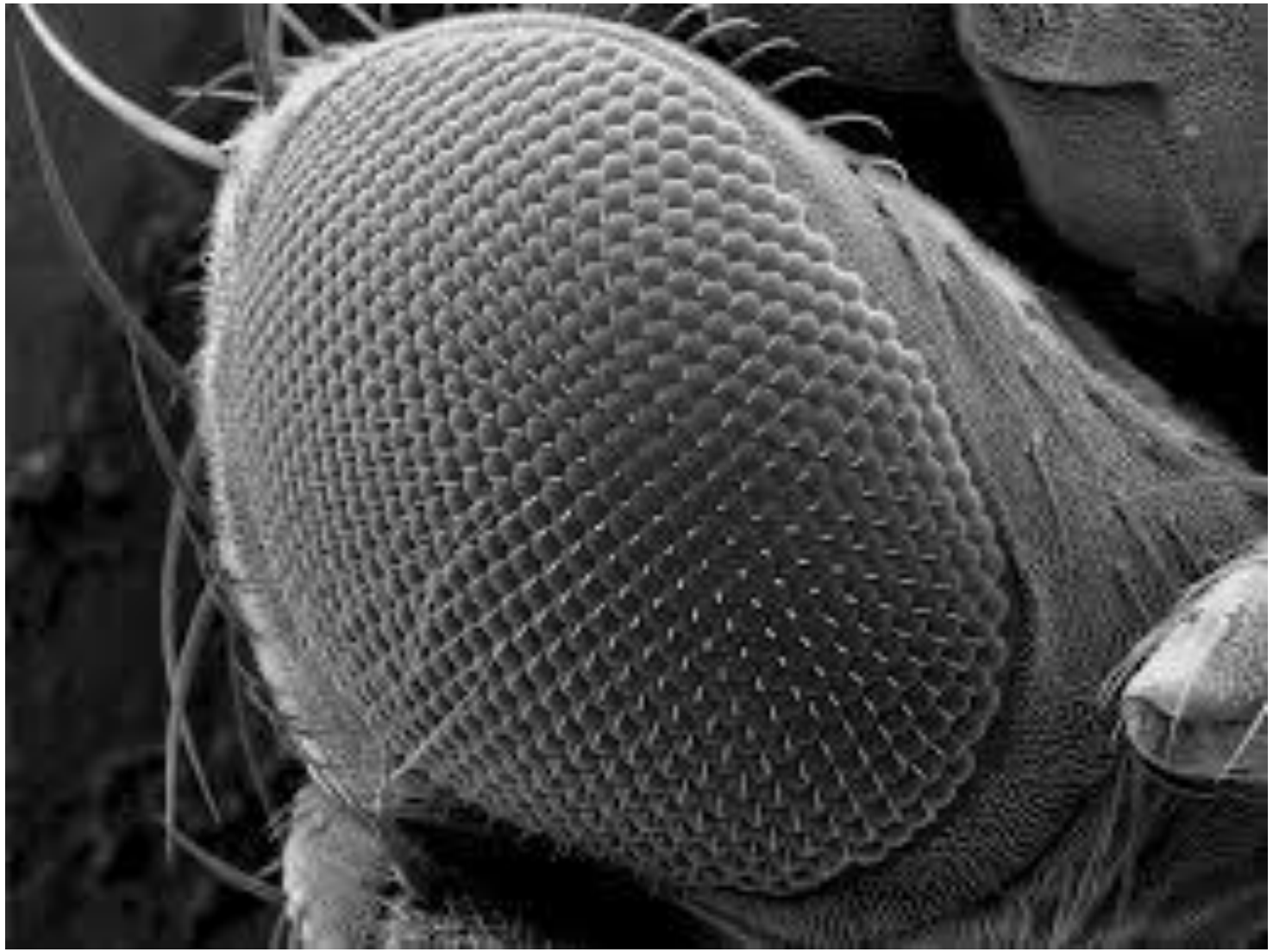
NOTES: Cellular Organelles

OBJ: TO UNDERSTAND THE FUNCTIONS OF ORGANELLES







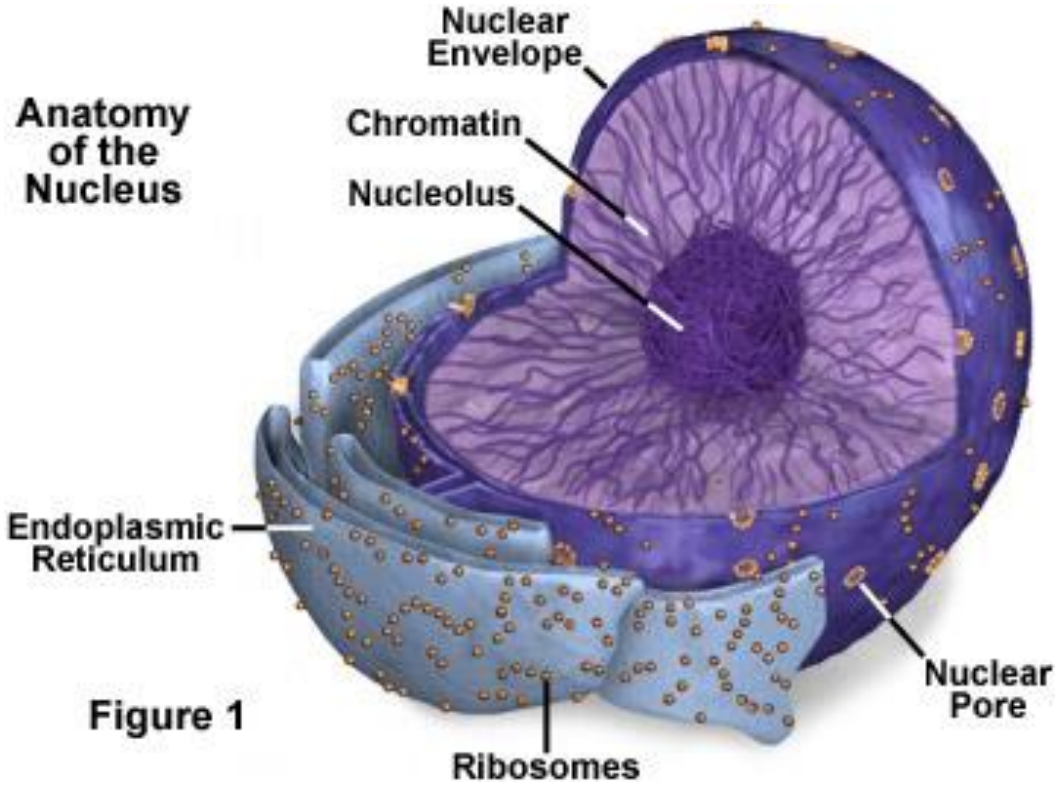


Cytoplasm

- "jelly-like" substance outside the nucleus
- Shock absorber
- Is found in prokaryotes too!

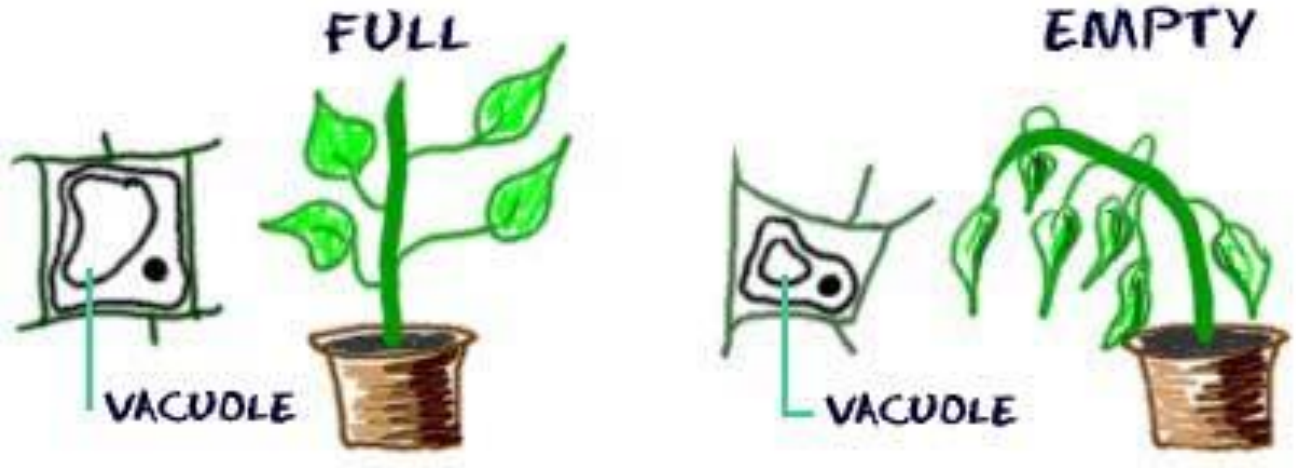
Nucleus

- "control center"
- Contains DNA
- Deoxyribonucleic acid
- Gives directions to rest of cell
- Prokaryotes do not have a nucleus, but do have DNA



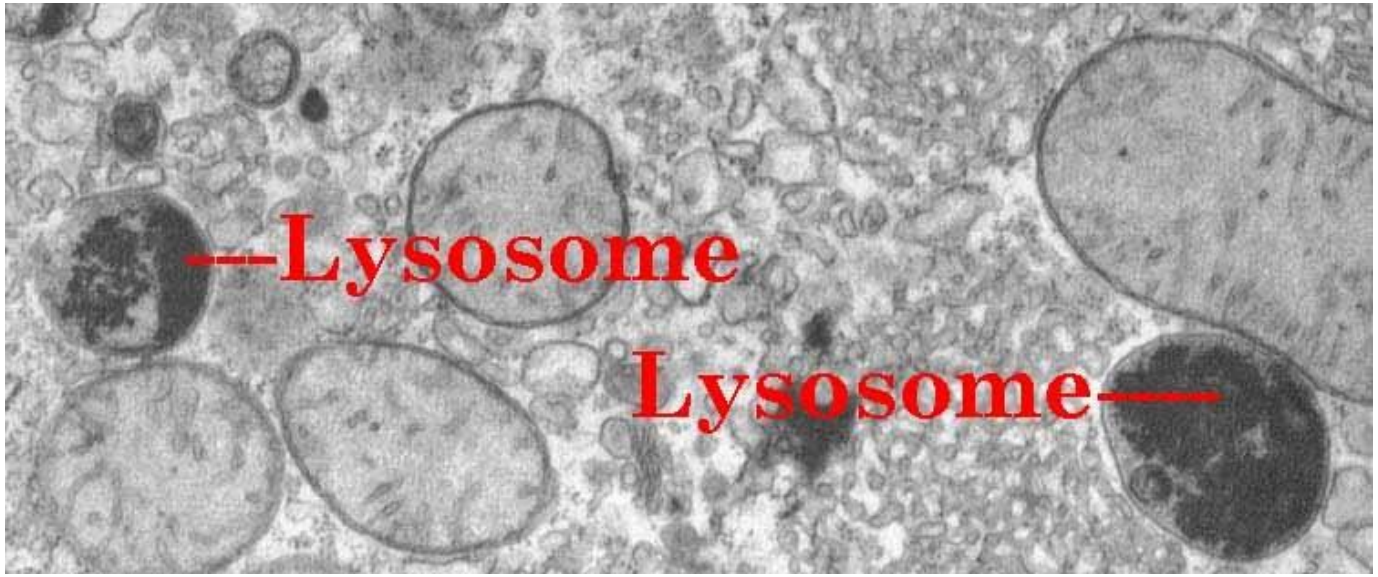
Vacuole

- Storage facility
- In plants there is usually one large vacuole
- Pumps materials out of cell
- Contains waste, excess sugar and unneeded materials



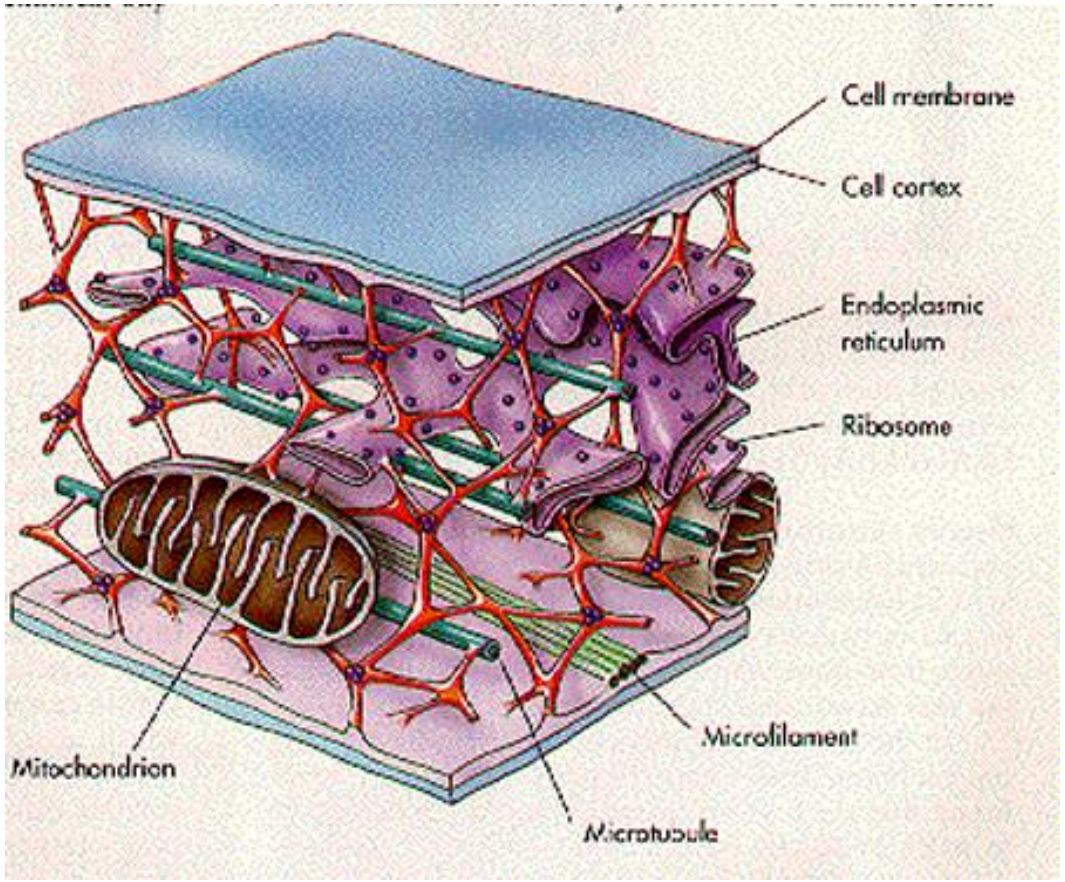
Lysosome

- "clean up crew"
- Contains enzymes that breakdown old or worn out organelles



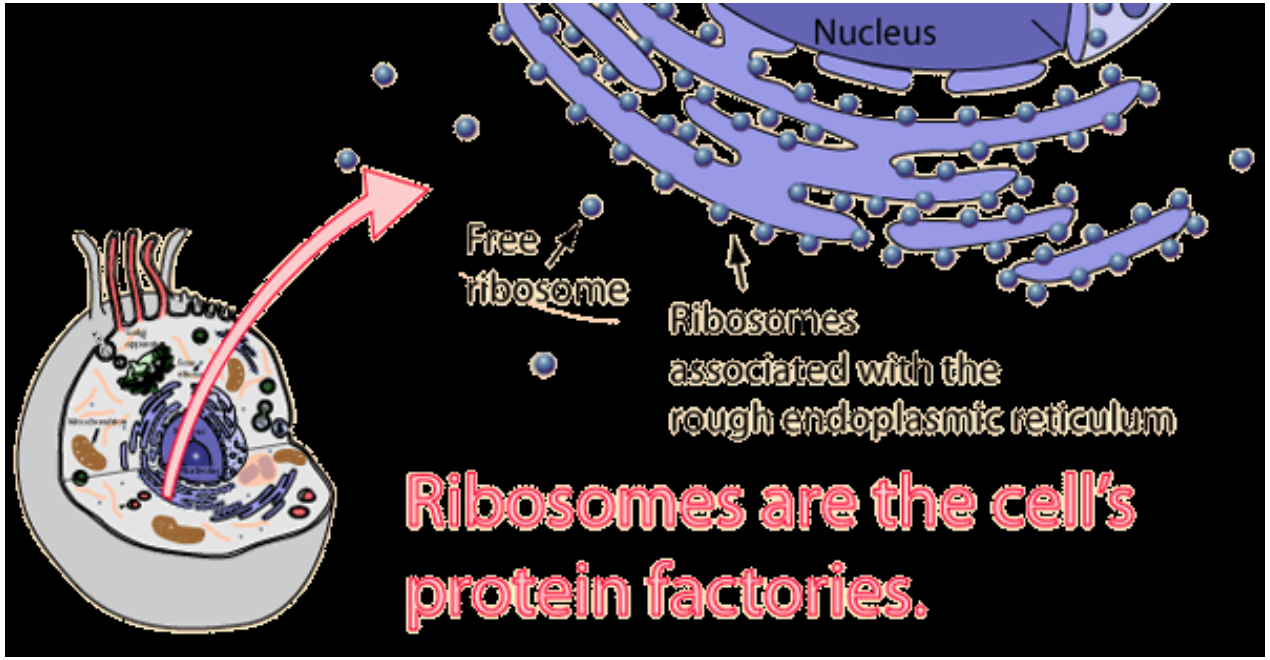
Cytoskeleton

- Protein filaments that provide cellular structure
- Acts as a scaffold for the cell
- Keep in mind: shape matters for a cell



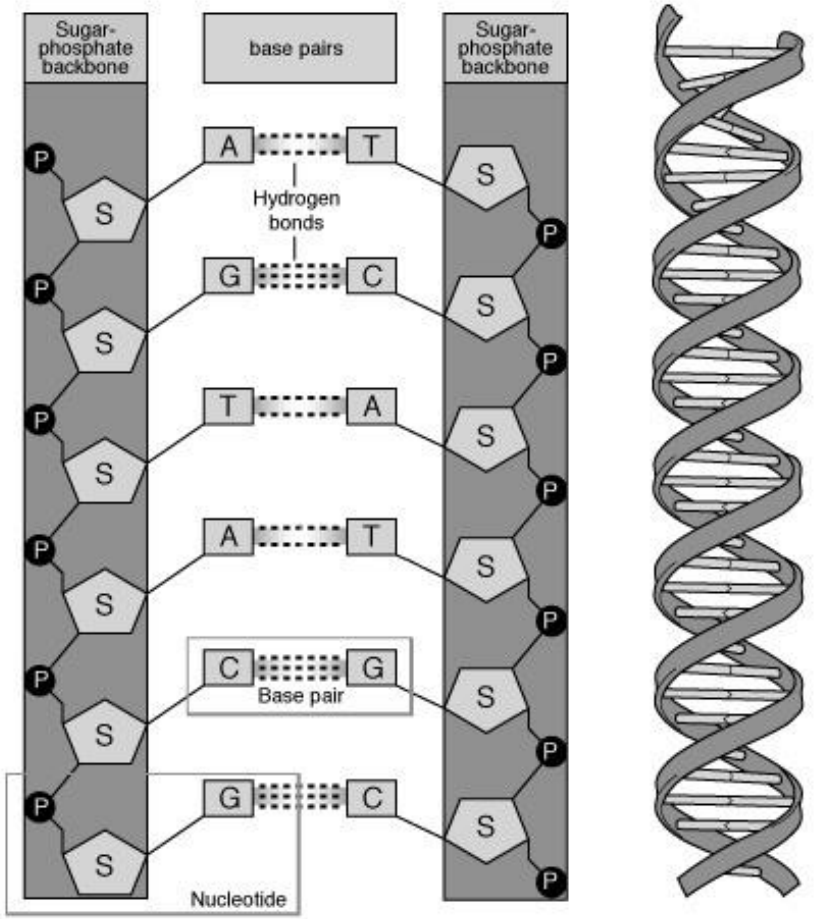
Ribosomes

- "protein factories"
- Multiple ribosomes in most cells
- Contain RNA which "reads" directions given through DNA
- RNA = ribonucleic acid



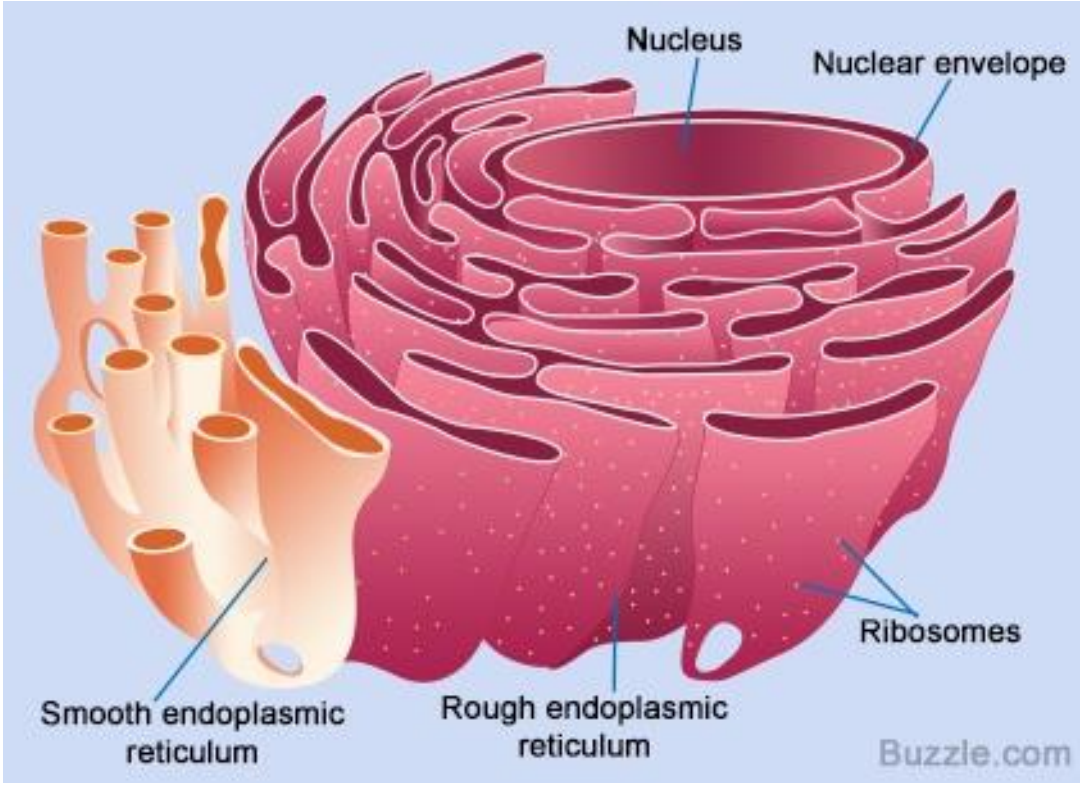
SIDEBAR: DNA

- Deoxyribonucleic acid
- Utilizes deoxyribose as its sugar



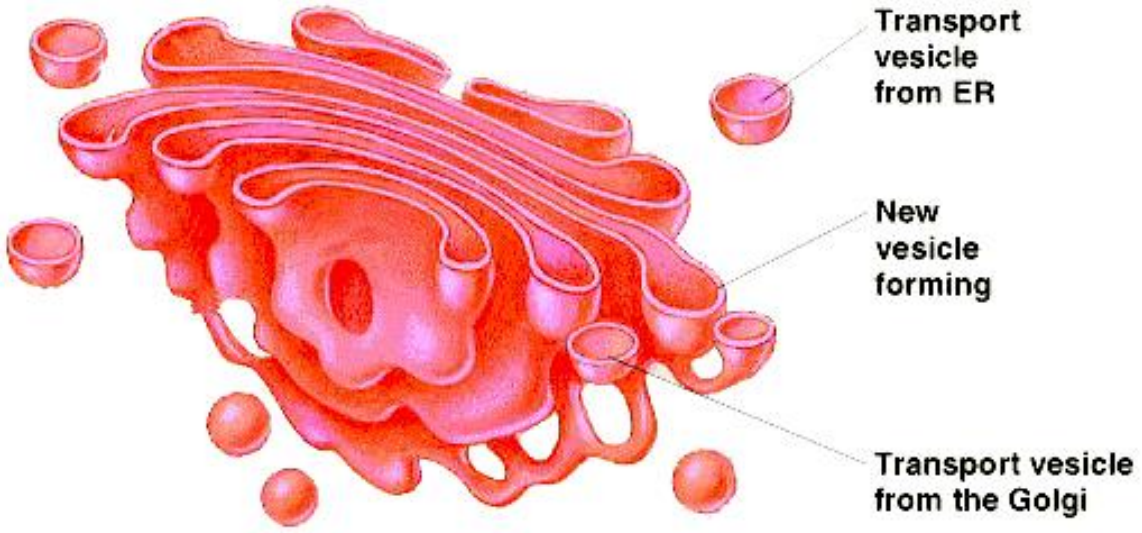
Endoplasmic Reticulum

- Where lipids (fats) and proteins are produced
- Smooth endoplasmic reticulum = no ribosomes
- Rough endoplasmic reticulum = ribosomes



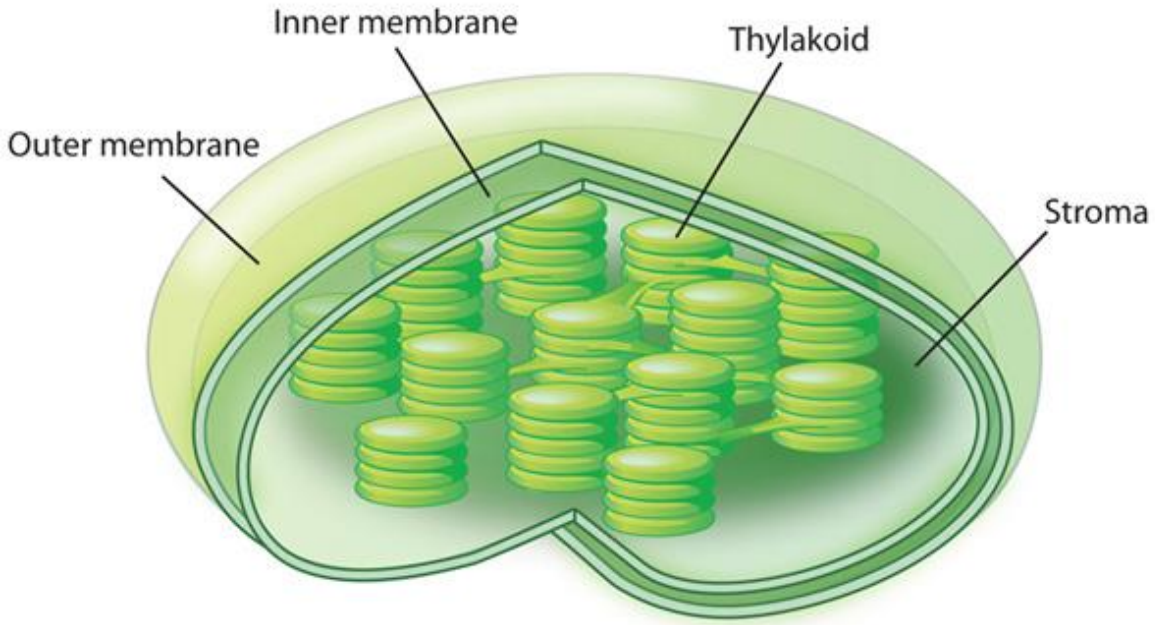
Golgi Apparatus

- "Factory"
- Modifies, sorts and packages proteins received from ribosomes
- Works with the vesicle to transport proteins where they are needed



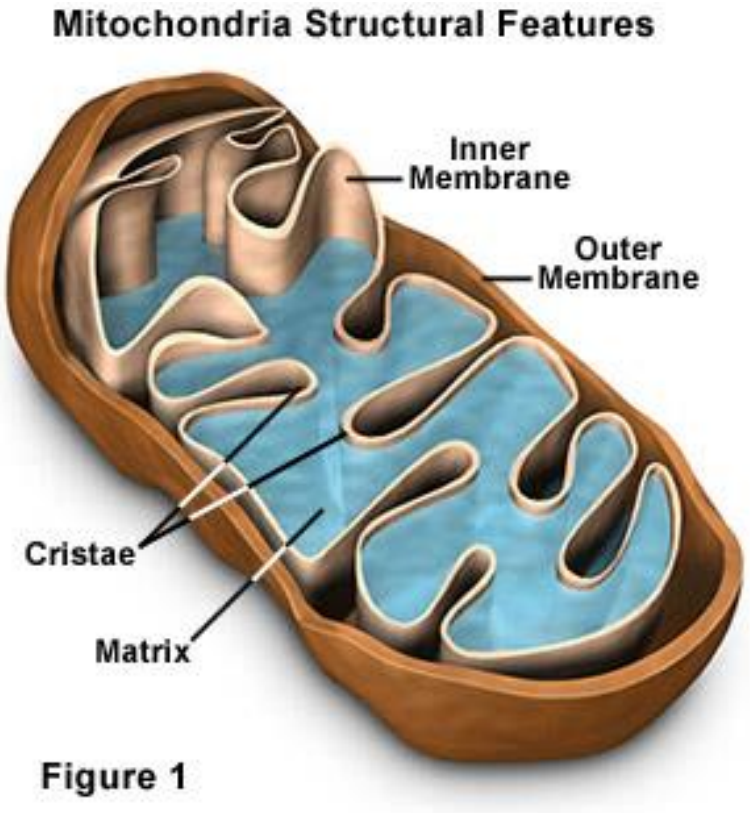
Chloroplast

- Energy production in plants
- Converts light energy into sugars
- Double membraned



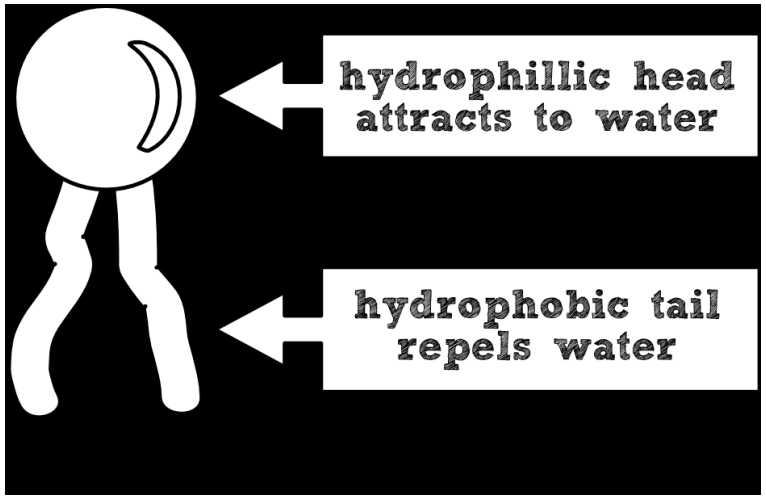
Mitochondria

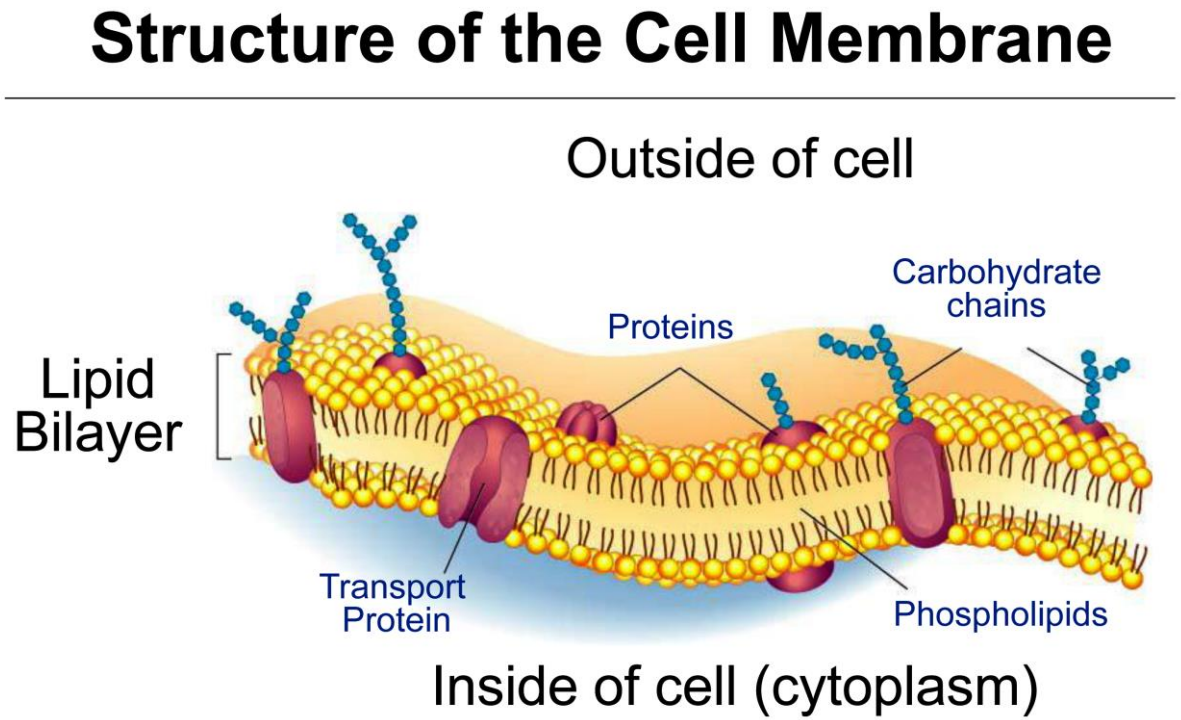
- Converts chemical energy into sugar
- Double membrane (like the chloroplast)
- Mitochondrial DNA comes from mom!



Cell Membrane

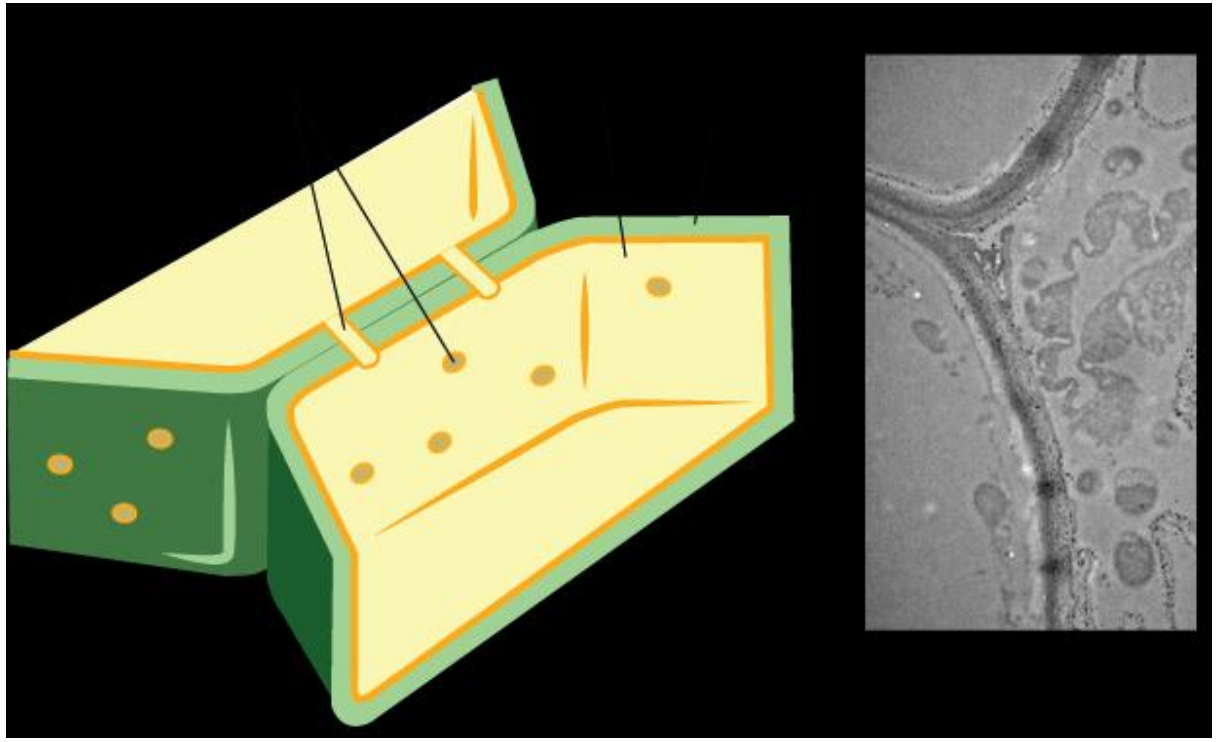
- Selectively permeable (allows certain things into and out of cell)
- Composed of a phospholipid bilayer





Cell Wall

- More rigid than cell membrane
- Helps maintain shape of plant cell



Homework

QUIZ OVER CELLULAR ORGANELLES

WEDNESDAY, JAN. 6