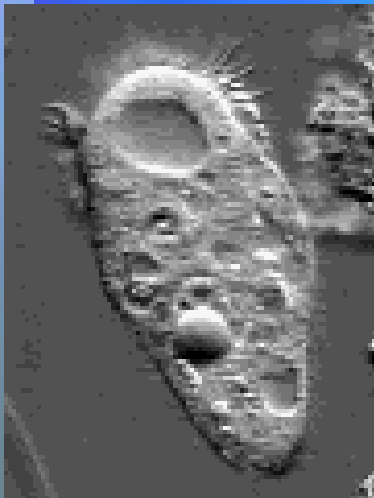


Biology I Chapter 3



CELLS



Discovery of the Cell

- Robert Hooke 1665
- Anton Van Leeuwenhoek 1673



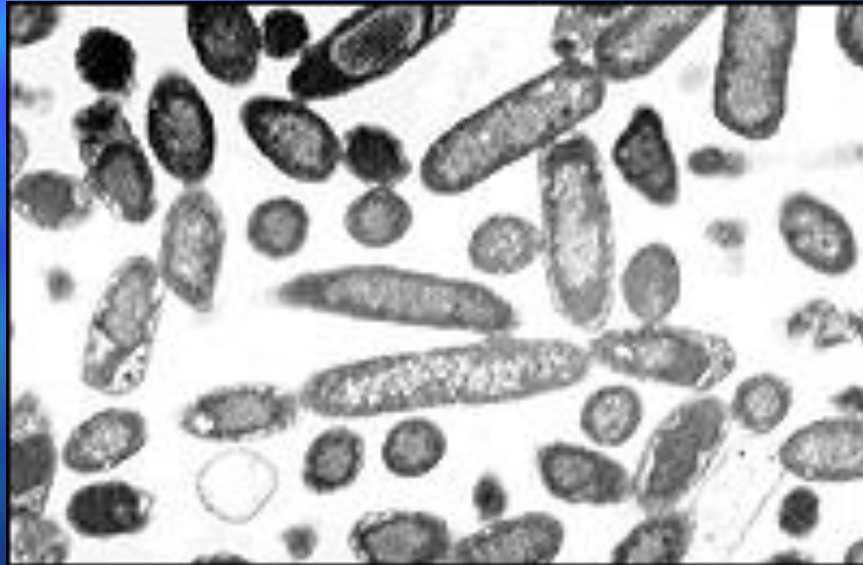
Cell Theory

- All living things are composed of one or more cells
- Cells are the basic unit of structure and function in organisms
- Cells come only from the reproduction of existing cells

Cell Diversity and Organelles

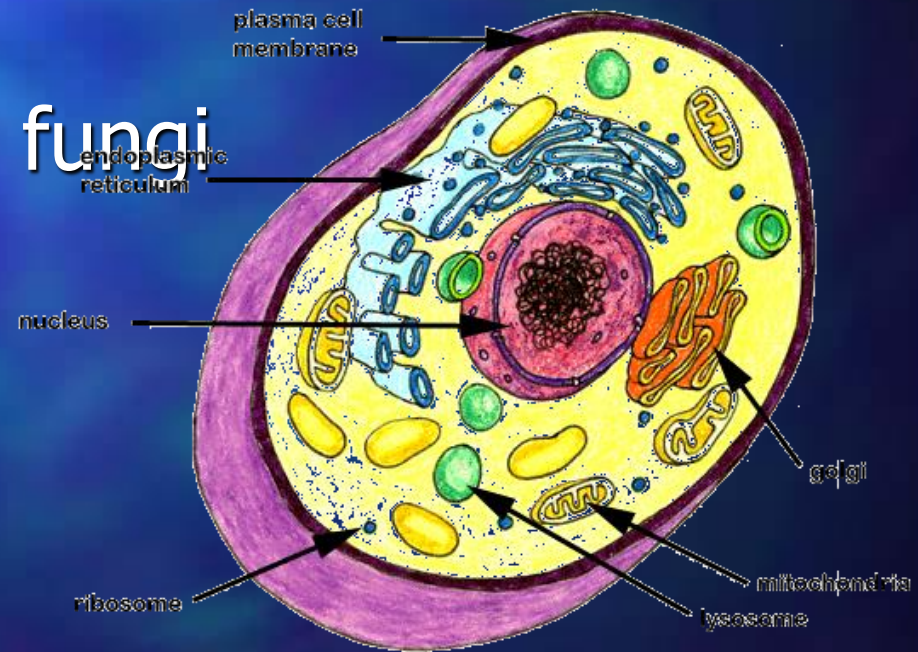
Prokaryotes

- No Membrane bound organelles
- Very Simple
- Bacteria



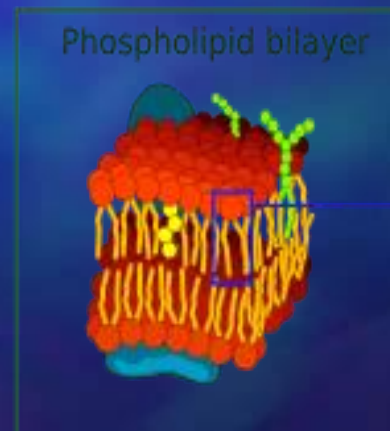
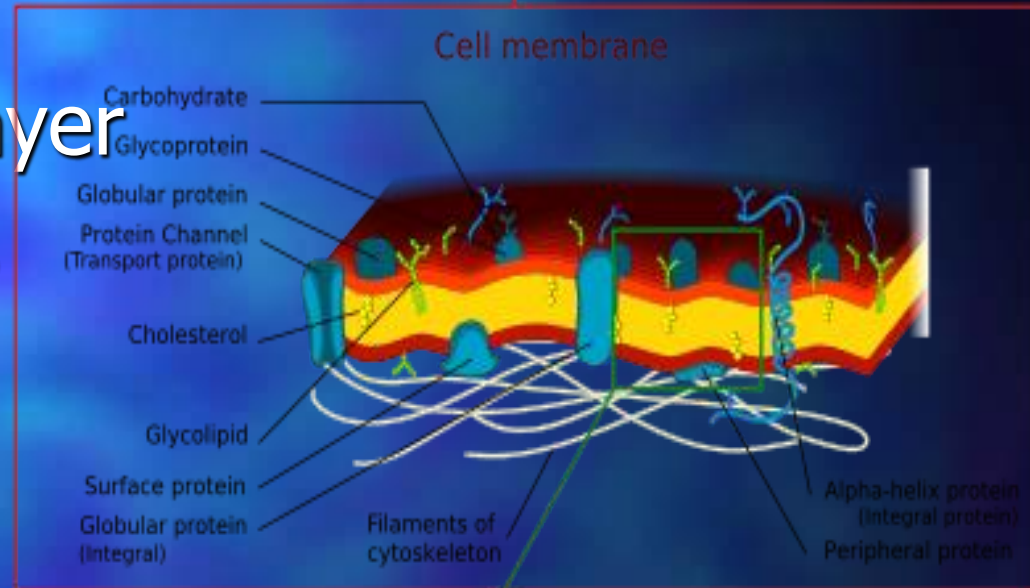
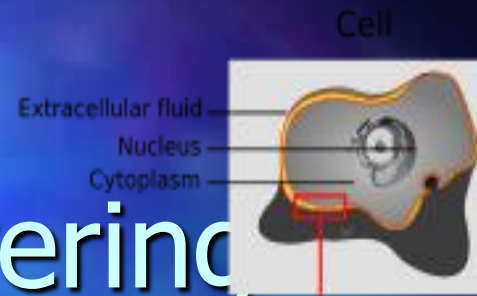
Eukaryotes

- Have advanced, membrane bound organelles
- Advanced life
- Plants, animals and fungi



Cell Membrane-covering

- Phospholipid Bilayer
- Integral proteins
- Steroids and carbohydrates

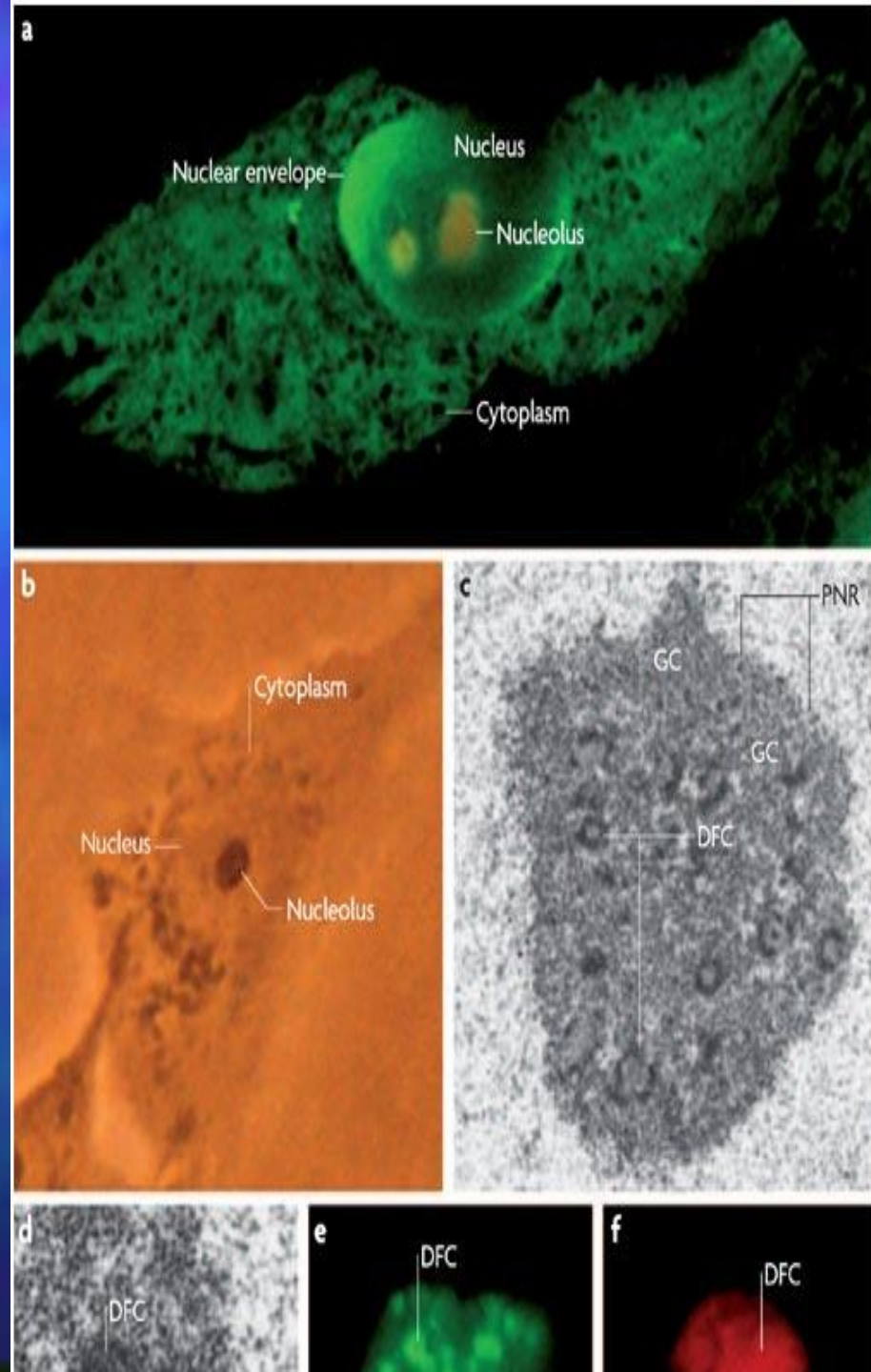


Traits of the Cell Membrane

- Fluid mosaic-moves
- Selectively permeable-specific on what goes in and out

Nucleus-control center

- Nuclear Membrane
- Nucleolus
- Pores



Cytoplasm:

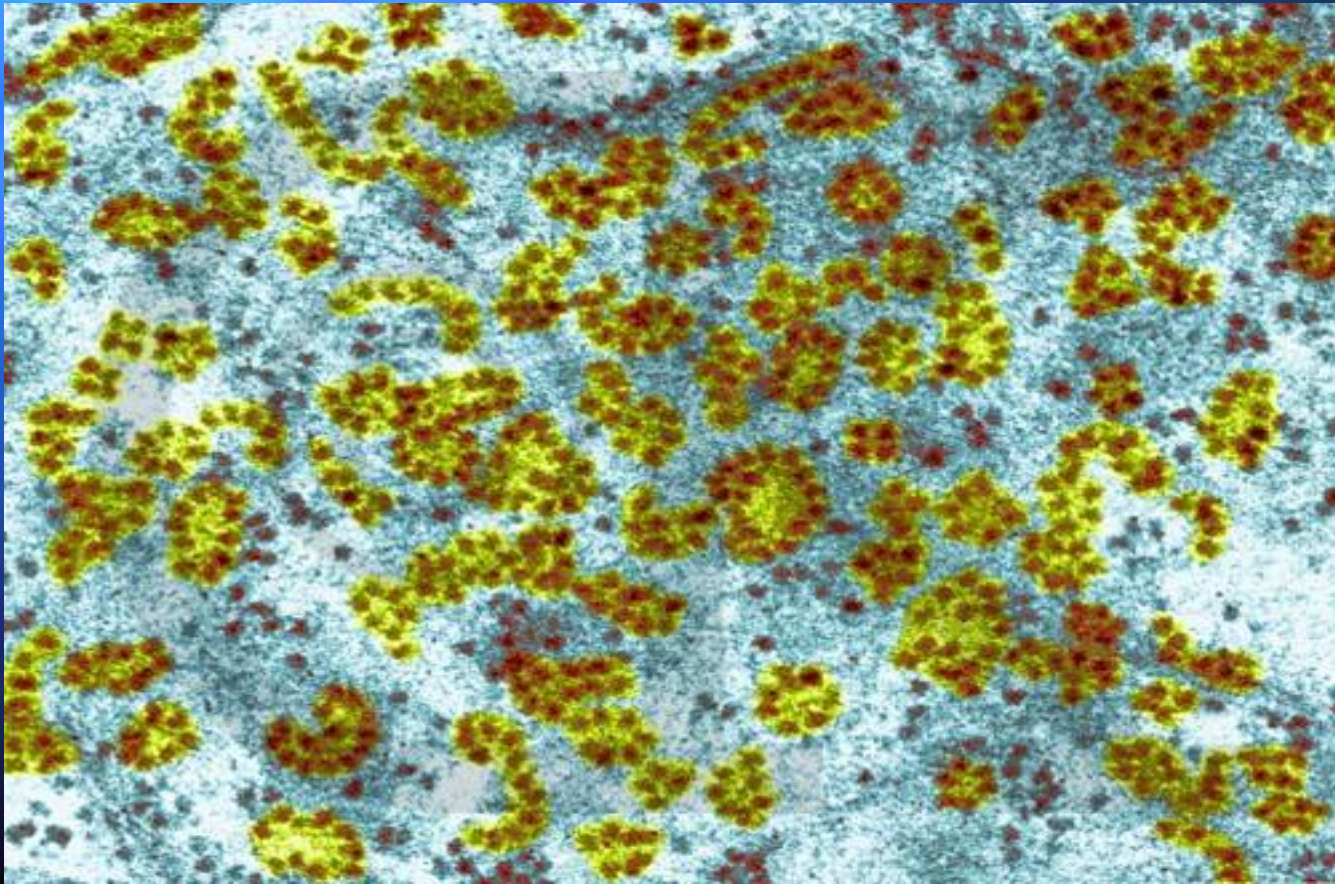
- Space within a cell

Mitochondria-energy ATP



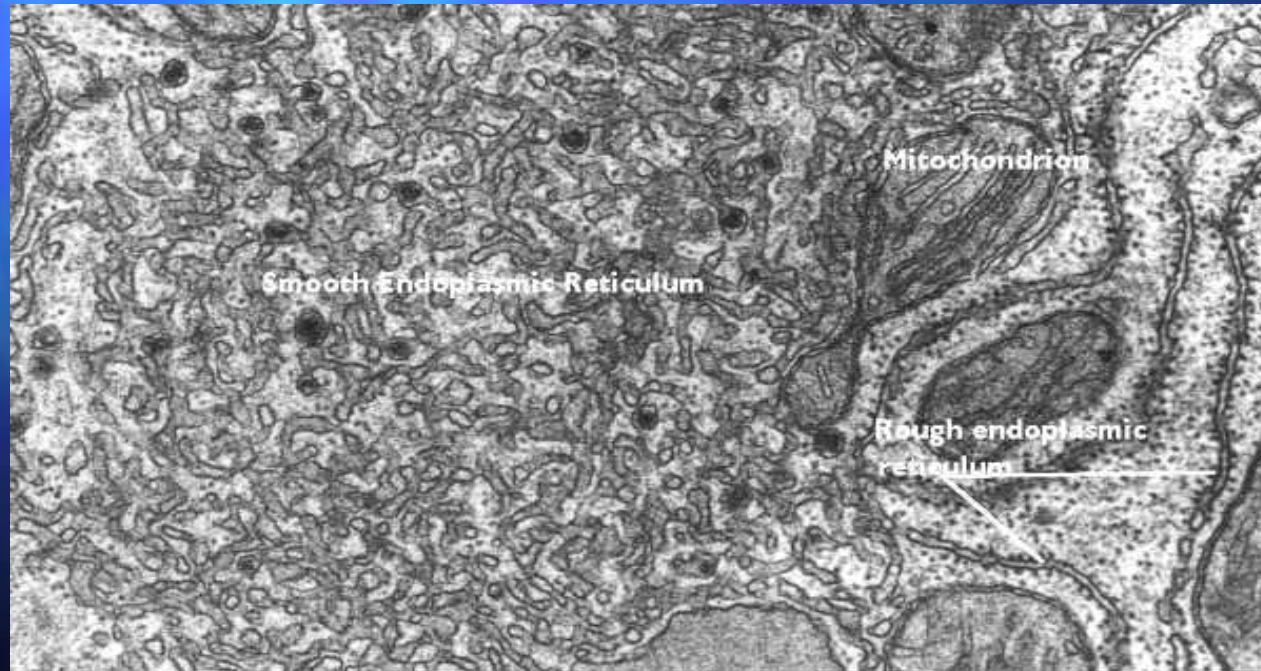
Ribosomes

- Make proteins



Endoplasmic Reticula-transport

- Rough
- Smooth



Golgi Apparatus-package and storage

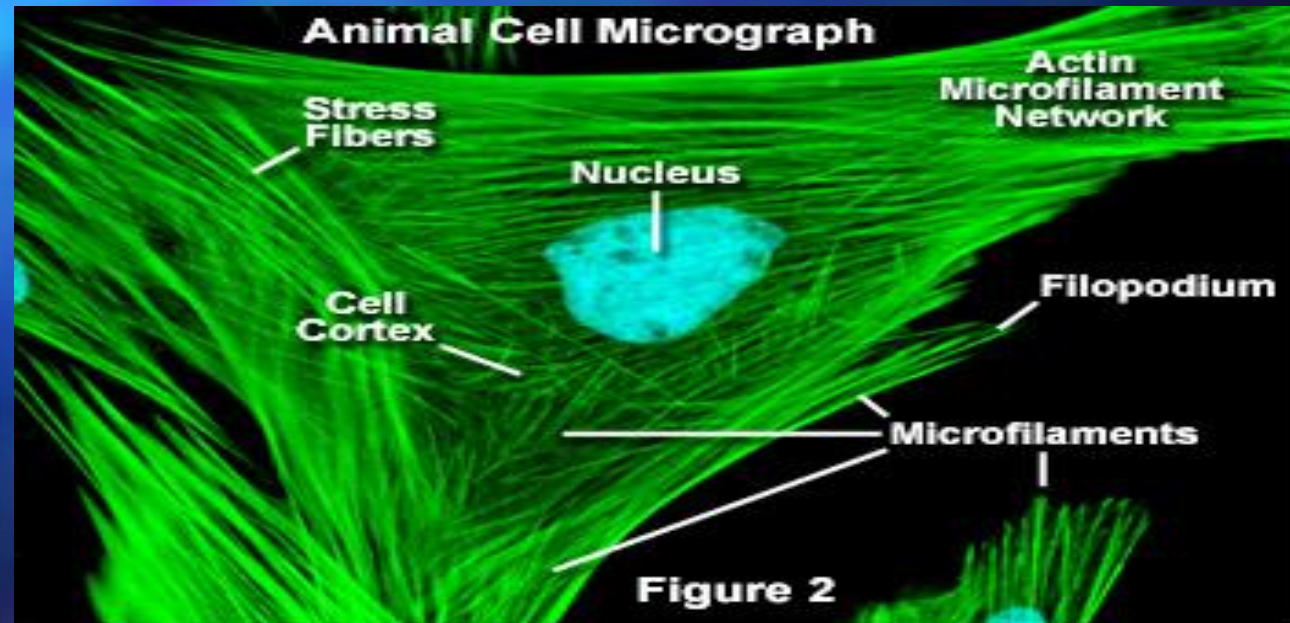


Lysosome-breakdown



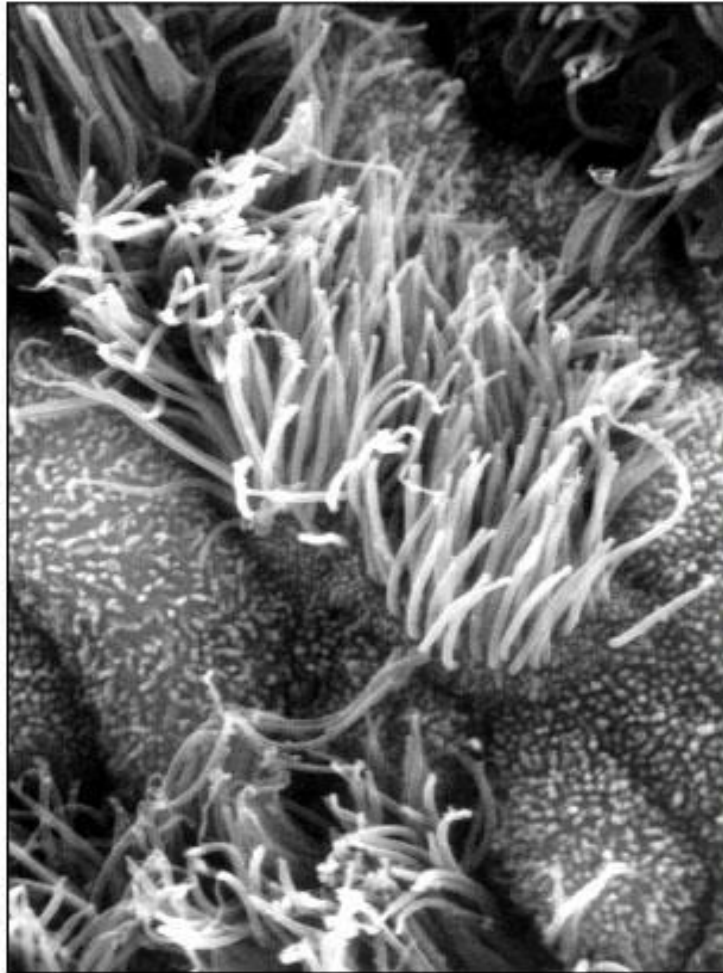
The Cytoskeleton-structure

- Microfilaments
- Microtubules
- Centrioles and spindle fibres



Cilia and Flagella-movement

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A

4 μm

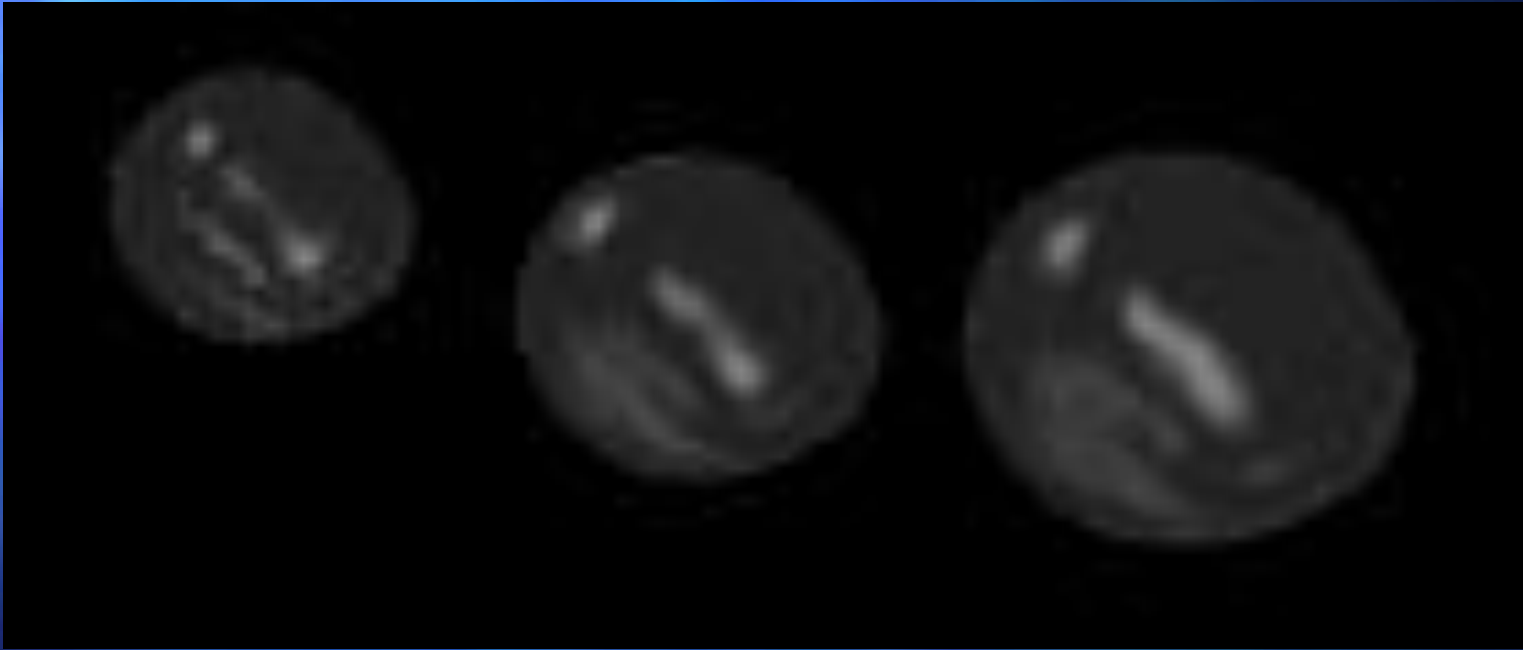


B

8 μm

Vacuole-storage

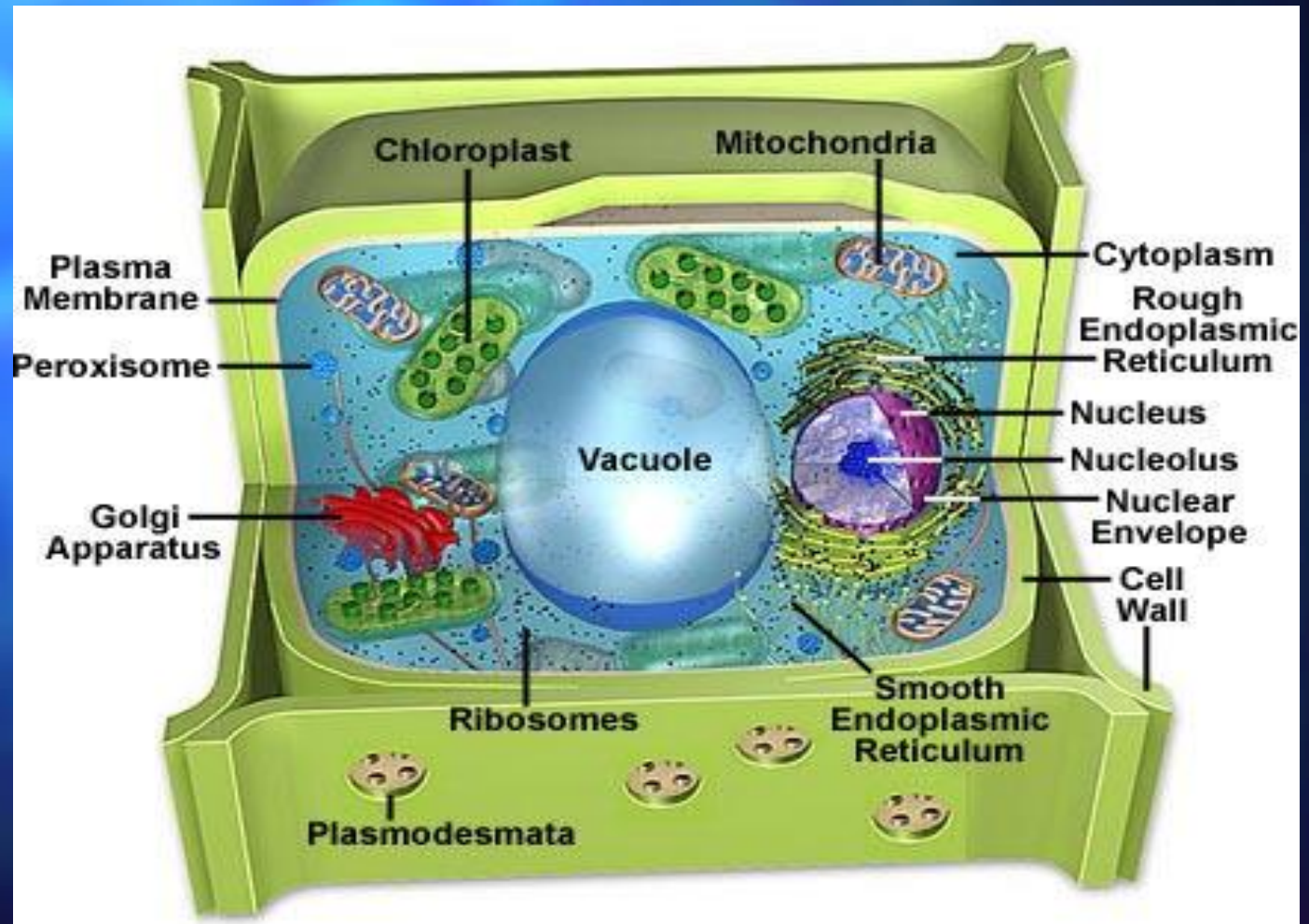
Plants-very large vacuole



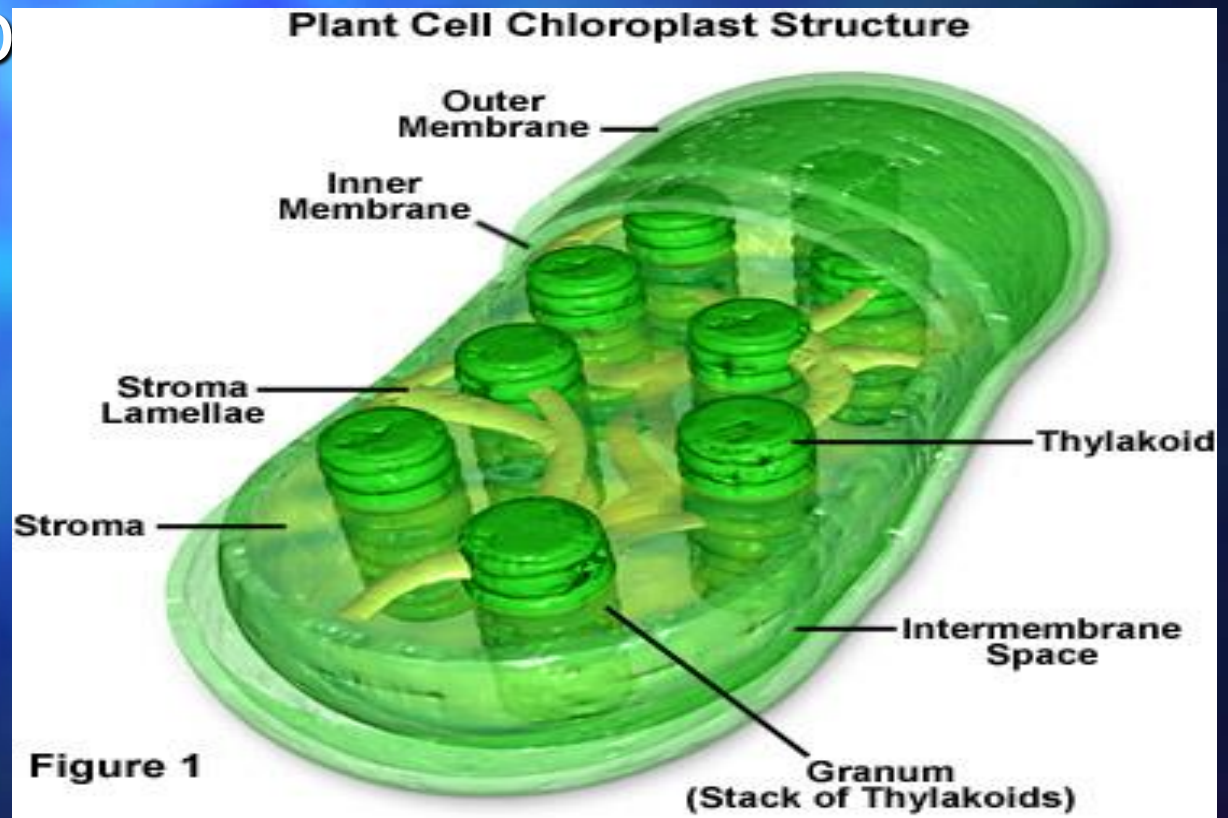
Plant (And some Fungi) Organelles



Cell Wall-structure



■ Chloroplasts-energy and food production



Plants under the microscope: Identify structures & function



Animals under the microscope: Identify structures & function

