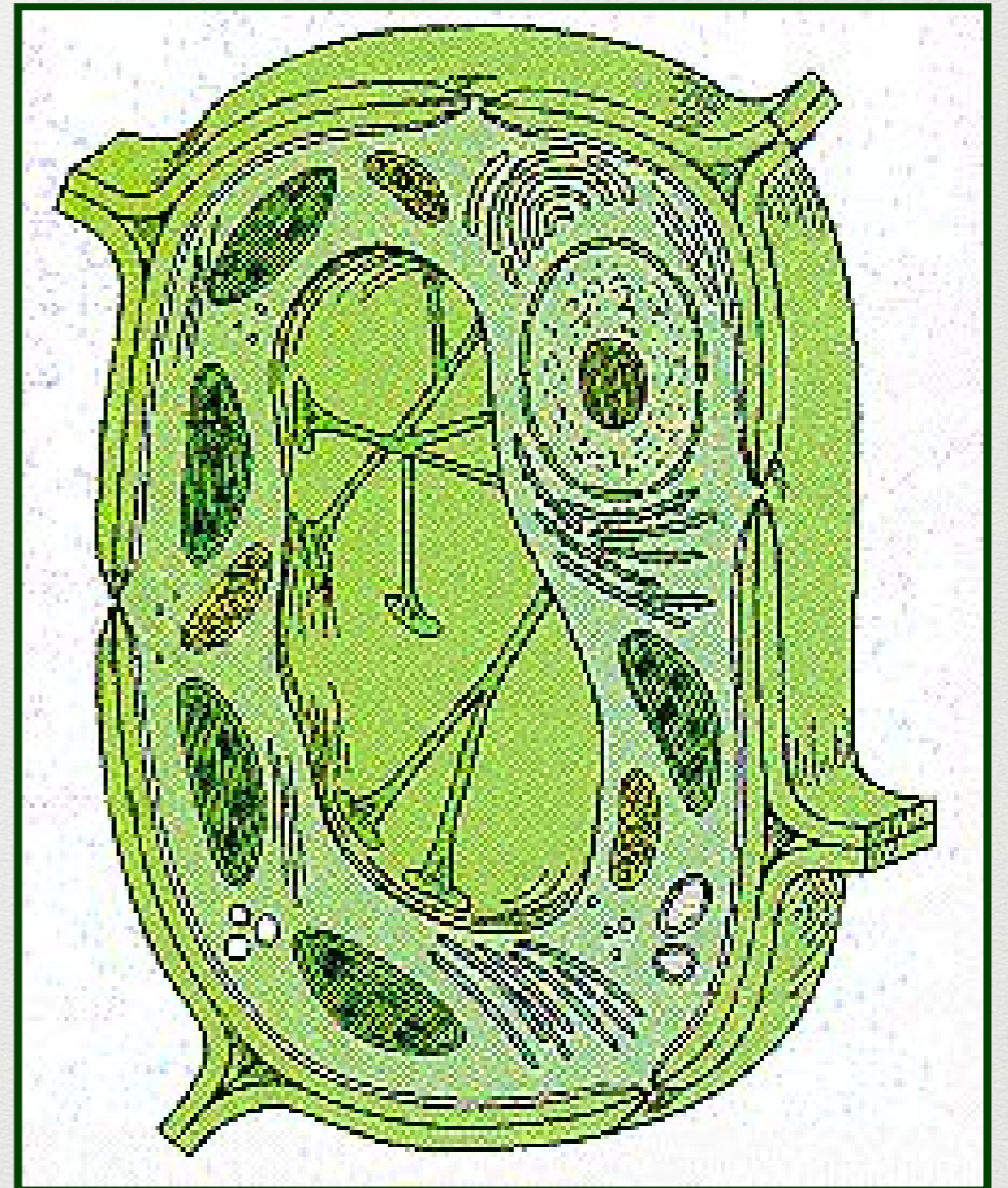


STRUCTURE AND FUNCTION OF THE CELL

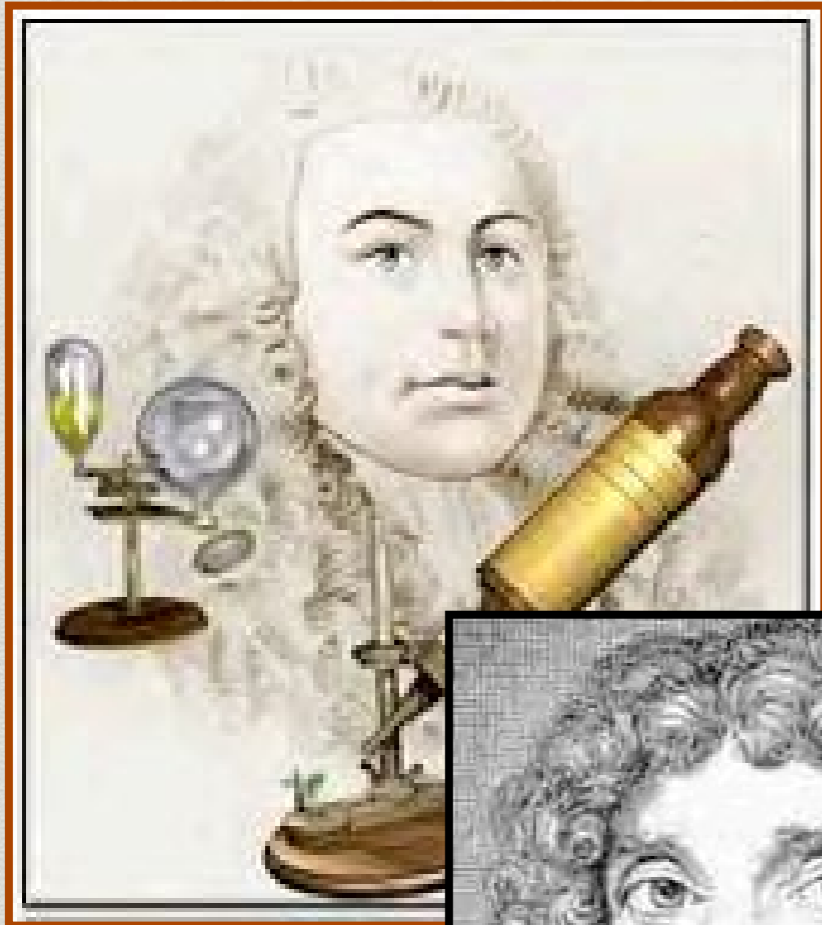
Ch. 4

Discovery of the Cell

- Cells -
 - Organized collection of molecules
 - Basic unit of structure and function in living things
 - Cells are the smallest unit of matter that can carry on all the processes of life.



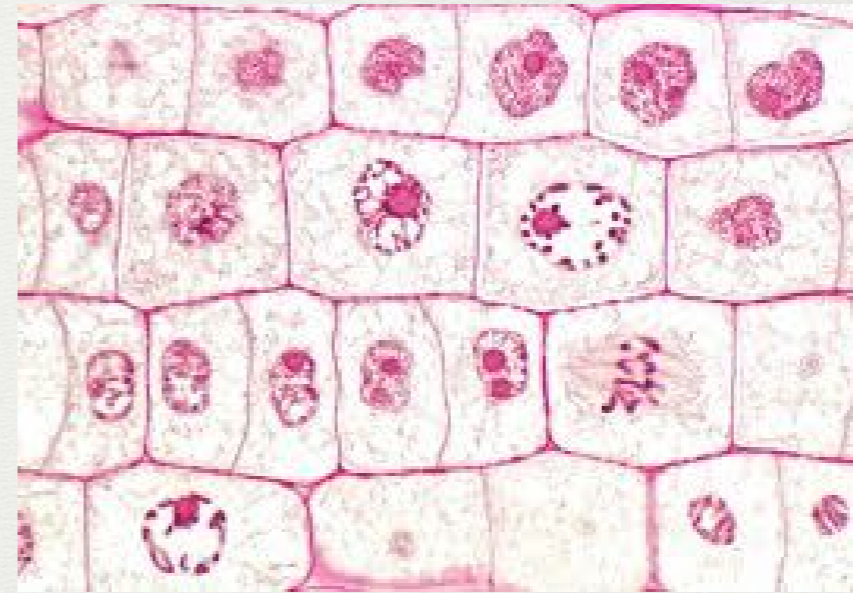
Discovery of the Cell



- 1665 - Robert Hooke used a microscope and discovered “cells”
- 1673 - Anton van Leeuwenhoek discovered first *living* cell

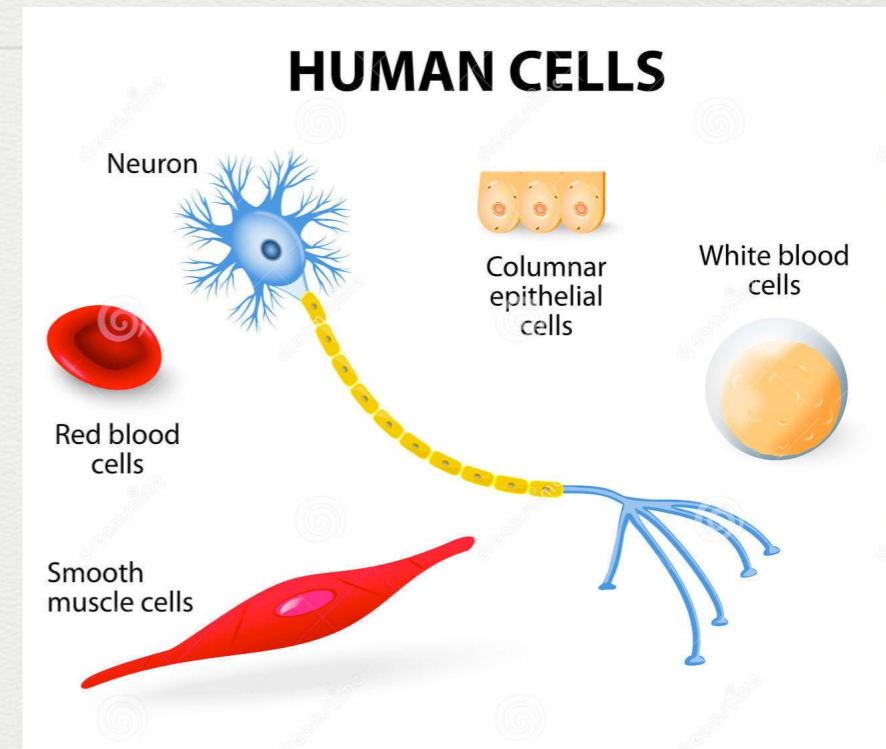
Cell Theory

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

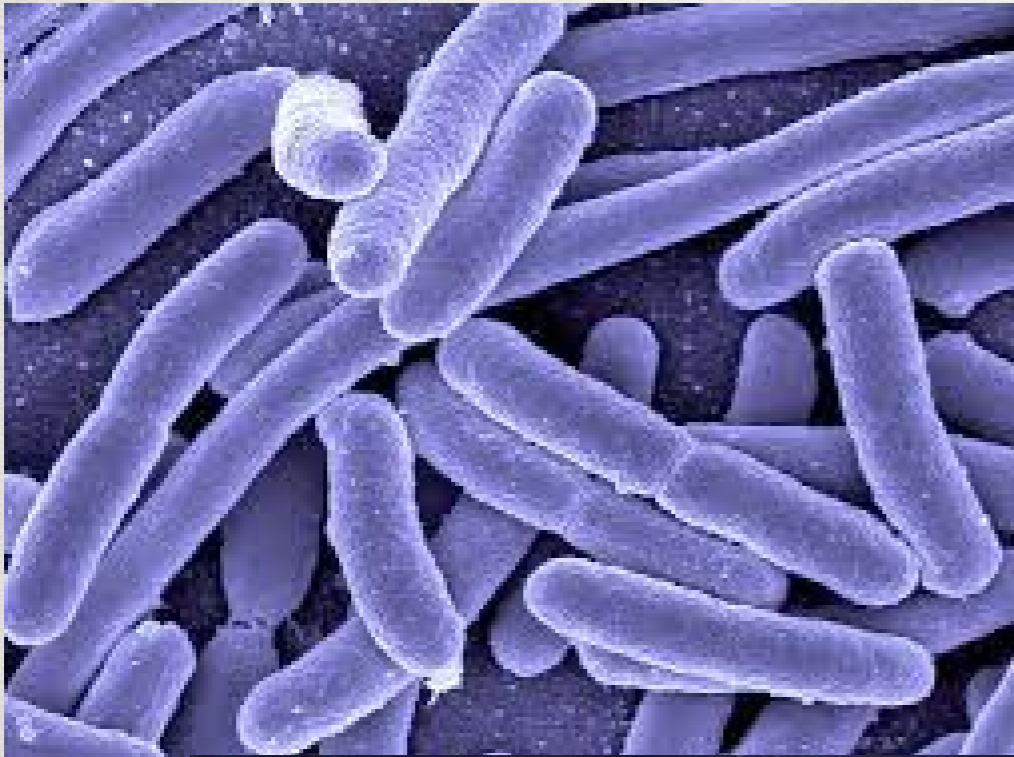


Cell Diversity

- Cells are highly variable in size and shape
- The structure is adapted to their function
- Cells are limited in size by a surface area to volume ratio



Cell Diversity

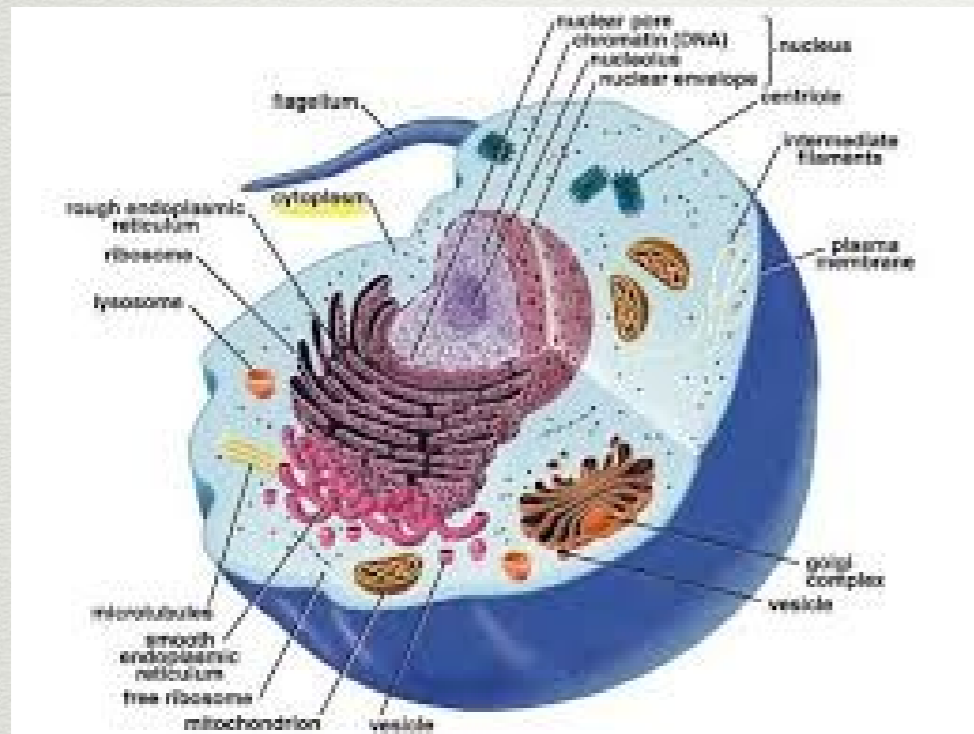


The Human Cell

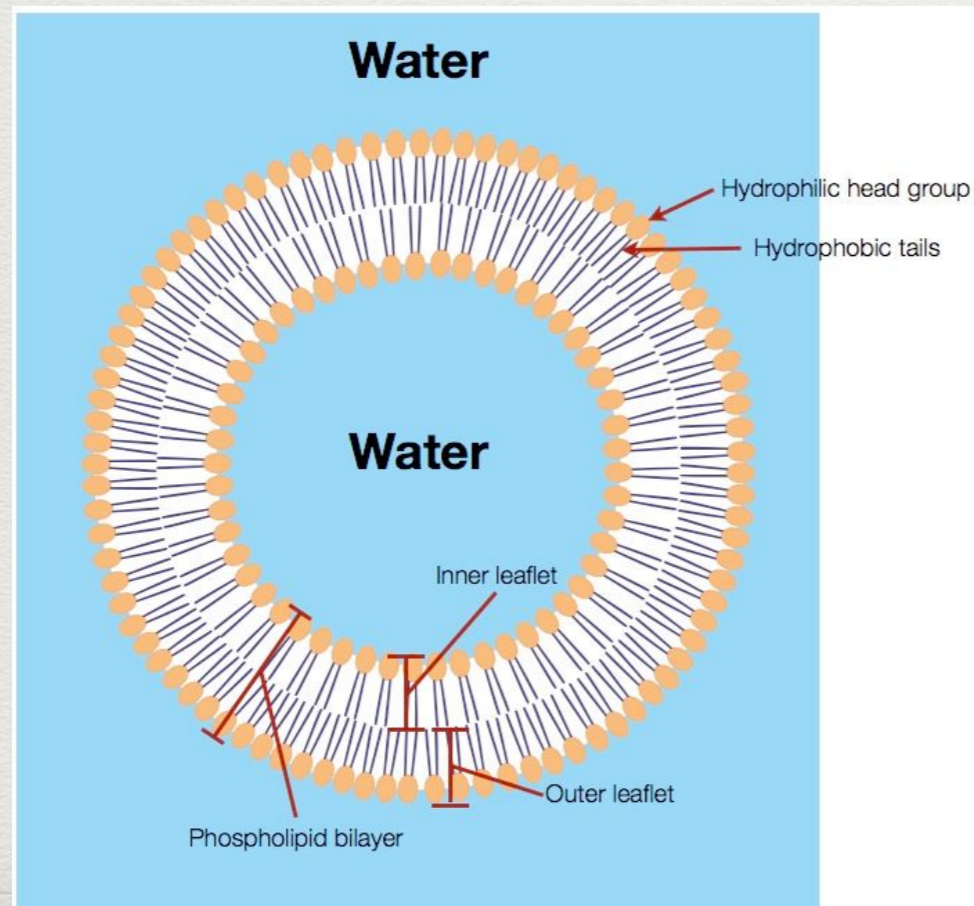


- Two main types of cells -
 - Prokaryotic - no organized nucleus; typically no organelles (Ex: Bacteria)
 - Eukaryotic - membrane bound nucleus; membrane bound organelles (Ex: You!)

Cell Diversity



- Organelles - internal structures that each perform a specific function for the cell



- Cell Membrane - phospholipid bilayer that surrounds the cell