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Anatomy Of The Cell

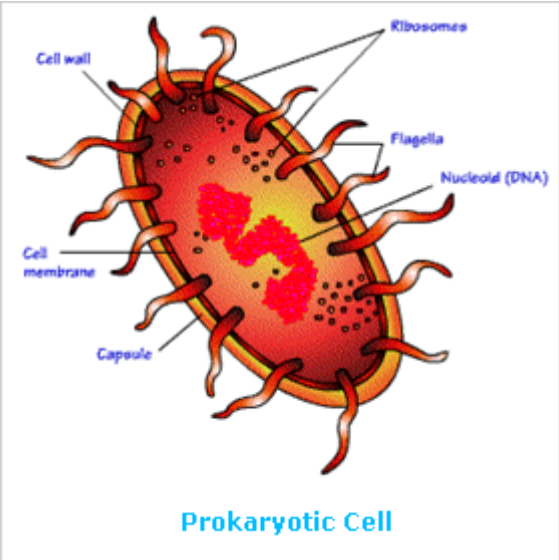
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Prokaryotic & Eukaryotic Cells

Cells are categorized in to two types: eukaryotic and prokaryotic. Prokaryotic cells are usually independent and eukaryotic cells are found in multi cellular organisms.

Prokaryotic Cells

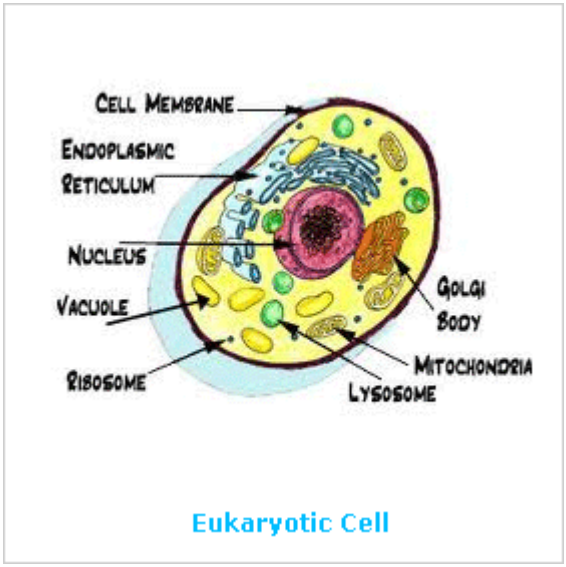
Prokaryotes are the cells which does not have a membrane-bound nucleus. Their internal structures can be visible under a microscope. Examples: bacteria and cyanobacteria.



Three regions of prokaryotic cell are Flagella and pili, Cell Envelope and Chromosomes.

- Flagella and pili project from the cell's surface and present the outside of the cell. These structures are made up of proteins and play important role in the movement and communication between cells;
- The cell envelope encloses the cell. It gives rigidity to the cell and act as a barrier between the interior of the cell and the outer environment. It serves as a protective filter for the cell.
- A prokaryotic chromosome is circular in shape. Prokaryotes can carry circular plasmids also and those plasmids enable additional functions, such as antibiotic resistance.

Eukaryotic cells



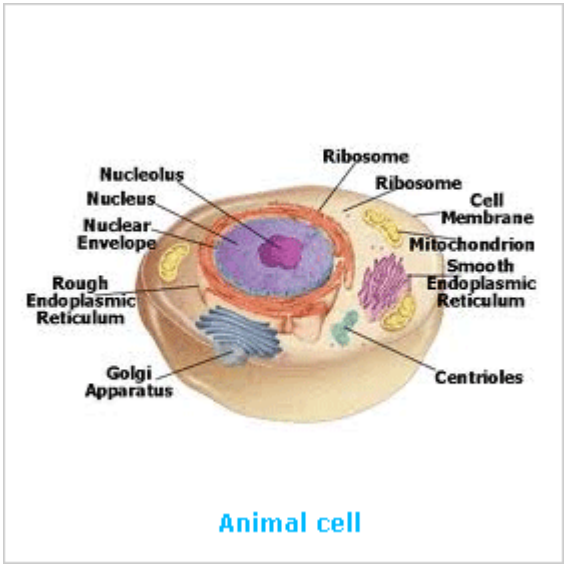
Eukaryotic Cell

Eukaryotic Cell Eukaryotic cells are nearly 15 times wider than a prokaryote and it is about 1000 times greater in volume.

- The cell nucleus is an important part of the cell which contains the genetic material theDNA.
- The plasma membrane resembles prokaryotes and the cell walls may or may not be present.
- The eukaryotic DNA is organized in chromosomes.
- Nucleus has many chromosomal DNA which separated from the cytoplasm by a membrane.
- Mitochondria also contain some DNA.
- Many eukaryotic cells are ciliated with complex primary cilia which help for the movement of eukaryotes.

ANIMAL CELL

Animal cell is enclosed by a plasma membrane and contains cell organelles & Nucleus. There is no cell wall in animal cell.

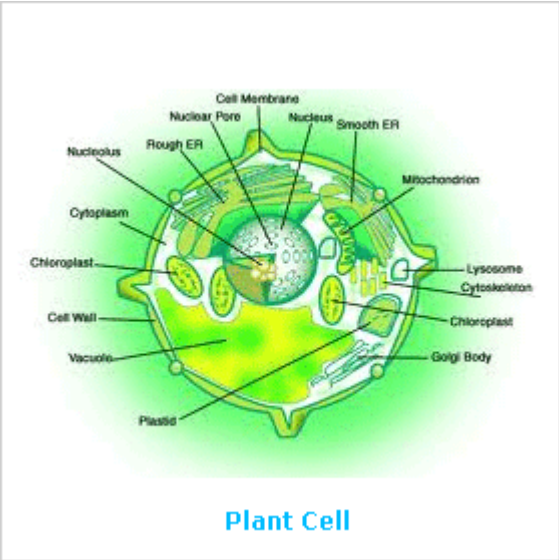


Animal cell

The absence of cell wall helps to develop a greater diversity of cell types, tissues and organs.

Animal tissues are bound together by a protein known as collagen makes it unique amongst other organism of eukaryotes. Animals make up ¾ of the earth species and because of their mobility it helps them to adopt to different physiological modes like reproduction, feeding etc

PLANT CELL



- Plant cells have a large central vacuole.
- A cell wall is made up of cellulose andhemicellulose, pectin and in many cases lignin.
- The chloroplasts containchlorophyll which plays an important role in photosynthesis.
- Plant cells don't move and they are stationary.

What are the differences between Plant Cell and Animal cell?

Want to know more about the "Plant cell & Animal cell"?Click here to schedule live help from a certified tutor!

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Reference Links

- http://en.wikipedia.org/wiki/Eukaryote
- http://en.wikipedia.org/wiki/Plant_cell
- http://library.thinkquest.org/C004535/prokaryotic_cells.html
- http://www.cellsalive.com/cells/3dcell.htm

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