

Some Major Organelles of the Cell

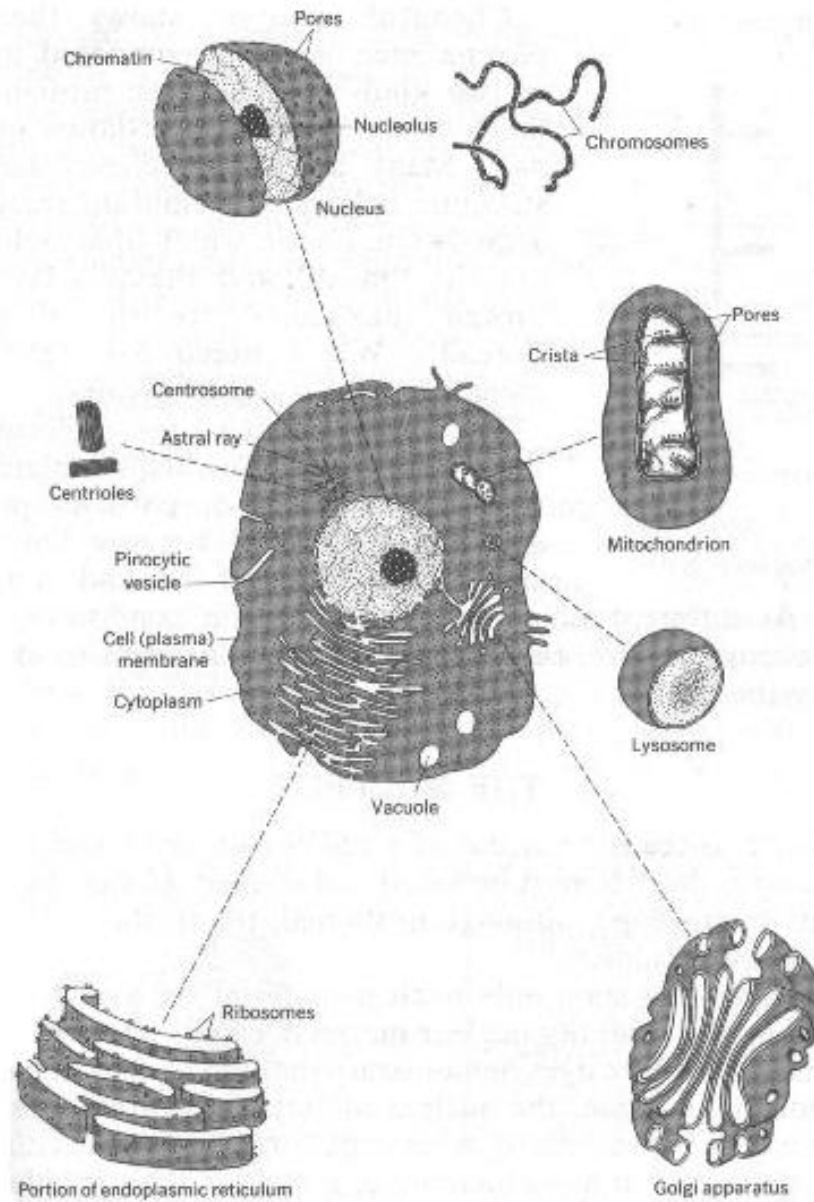
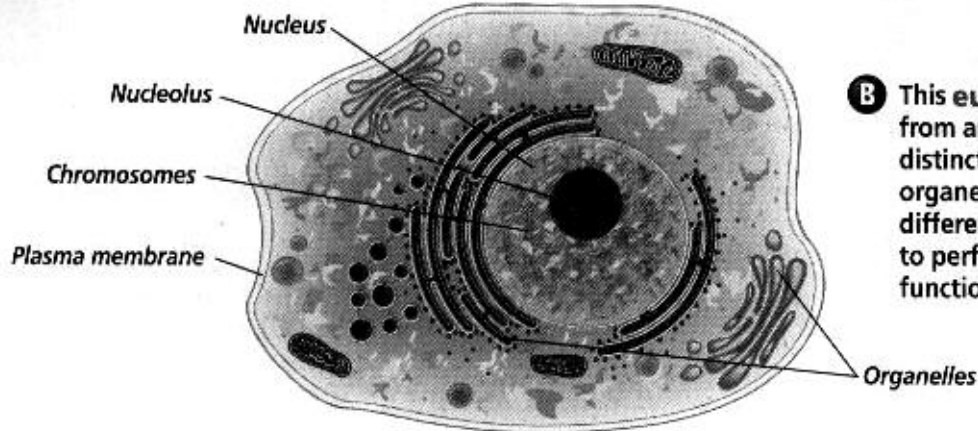
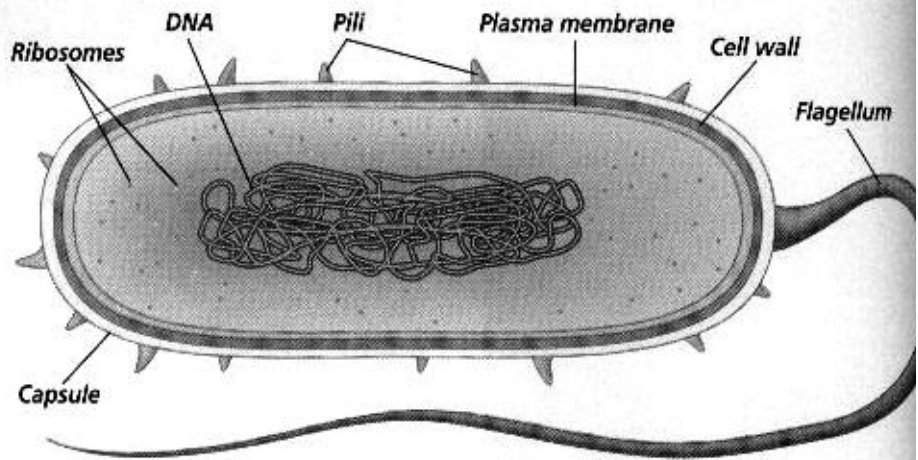


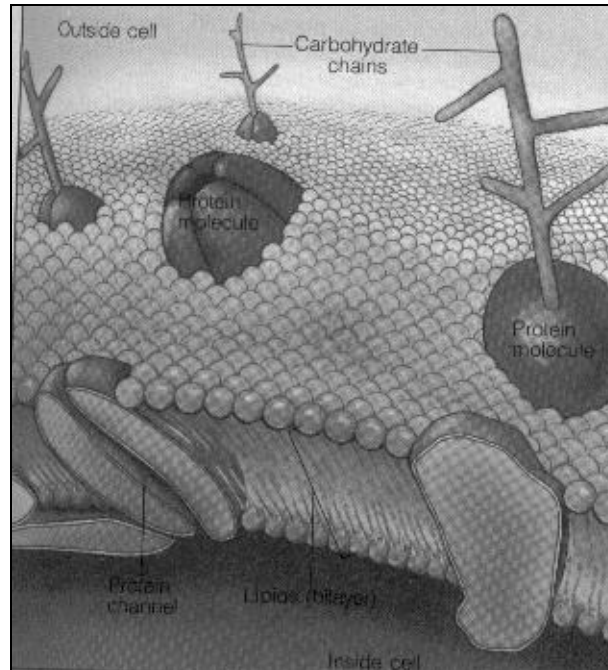
Figure 7.2
Bacteria and archaeobacteria are prokaryotes. All other organisms are eukaryotes.

A A Prokaryotic cell does not have internal organelles surrounded by a membrane. Most of a prokaryote's metabolic functions take place in the cytoplasm.



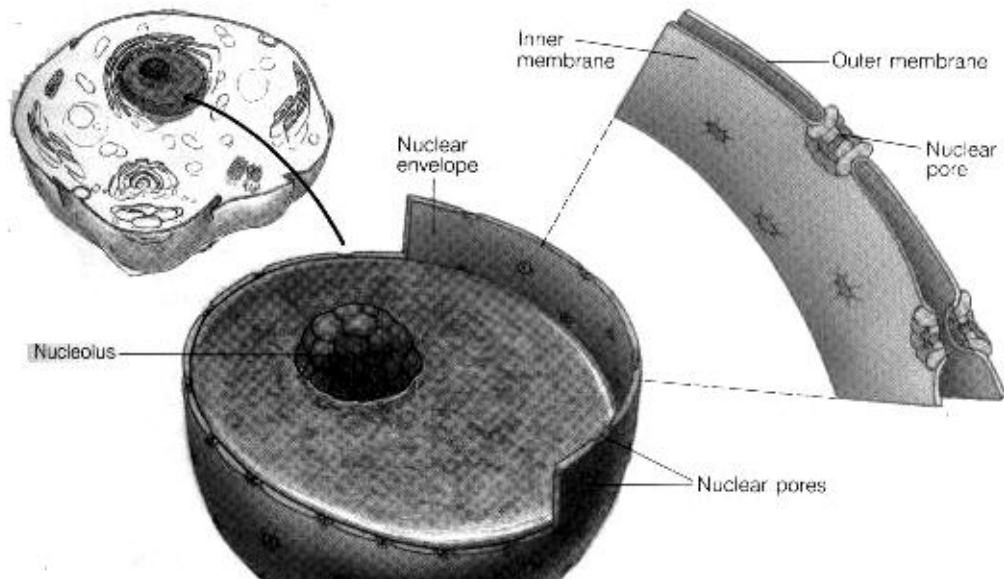
B This eukaryotic cell from an animal has distinct membrane-bound organelles that allow different parts of the cell to perform different functions.

The Cell Membrane



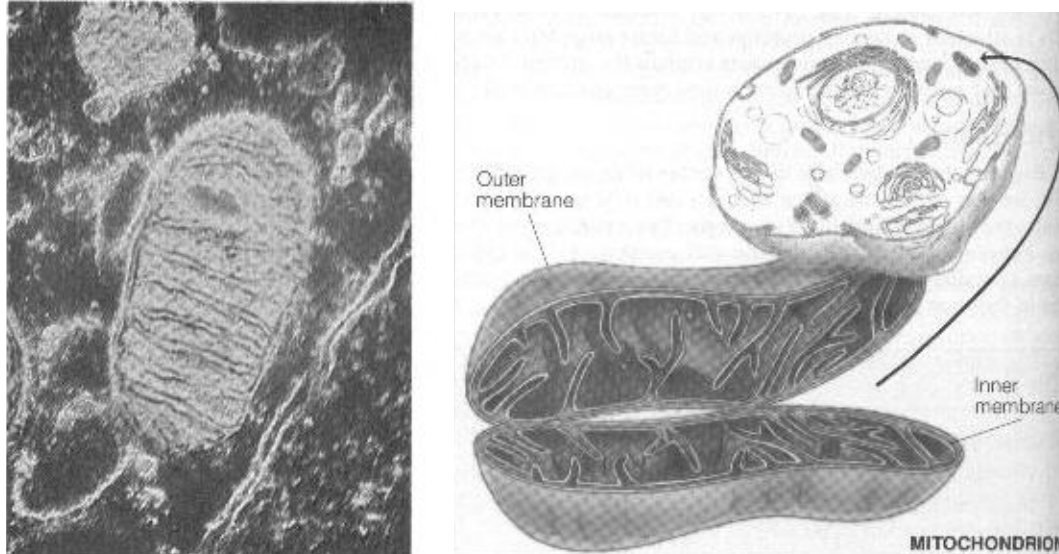
The cell membrane regulates what enters and leaves. It also protects & supports the cell. Proteins in the membrane act as pores to transport material and Carbohydrates are chemical recognition sites to communicate.

The Nucleus



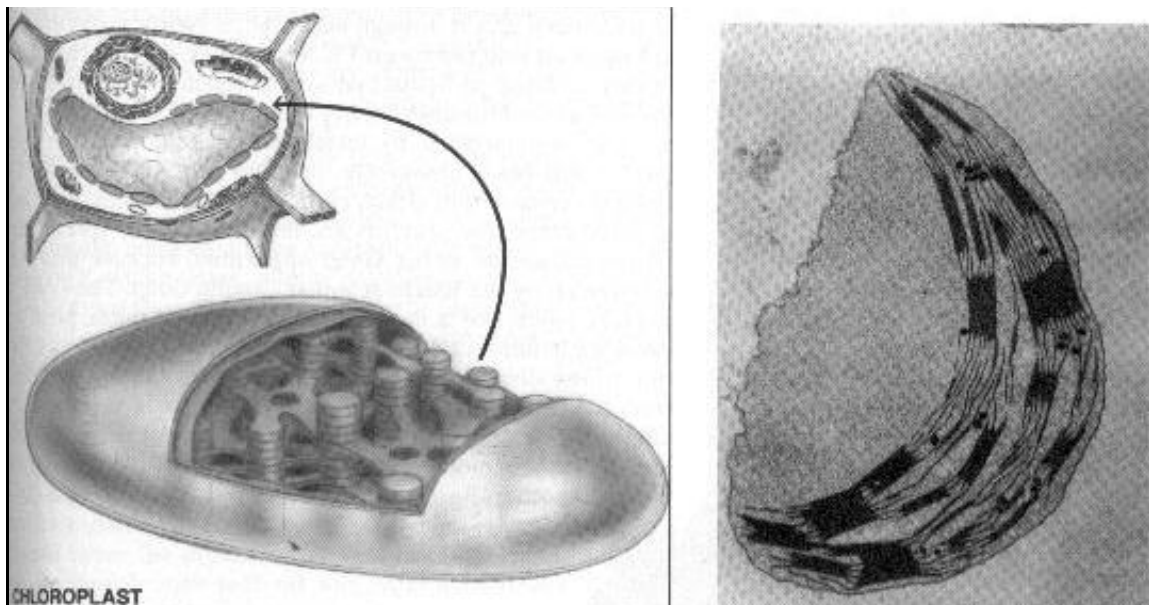
The nucleus directs all cell activities and has a double membrane. It contains the nucleolus which makes ribosomes. Ribosomes, in turn, help make proteins.

The Mitochondrion



Mitochondria convert chemical energy in food into compounds that the cell can use. It has two special membranes, a smooth outer membrane and an inside membrane with many folds.

The Chloroplast



Chloroplasts, found in plants and algae, trap energy from sunlight and convert it to chemical energy. The inside space, known as the stroma, contains flattened sacs called thylakoids stacked up in structures called grana. Chlorophyll is located within the thylakoid.

The Endoplasmic Reticulum

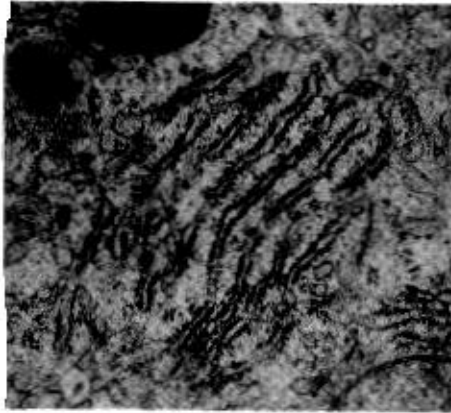
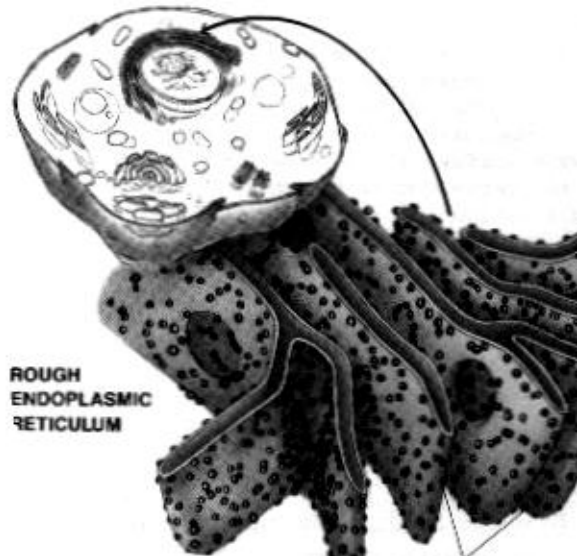
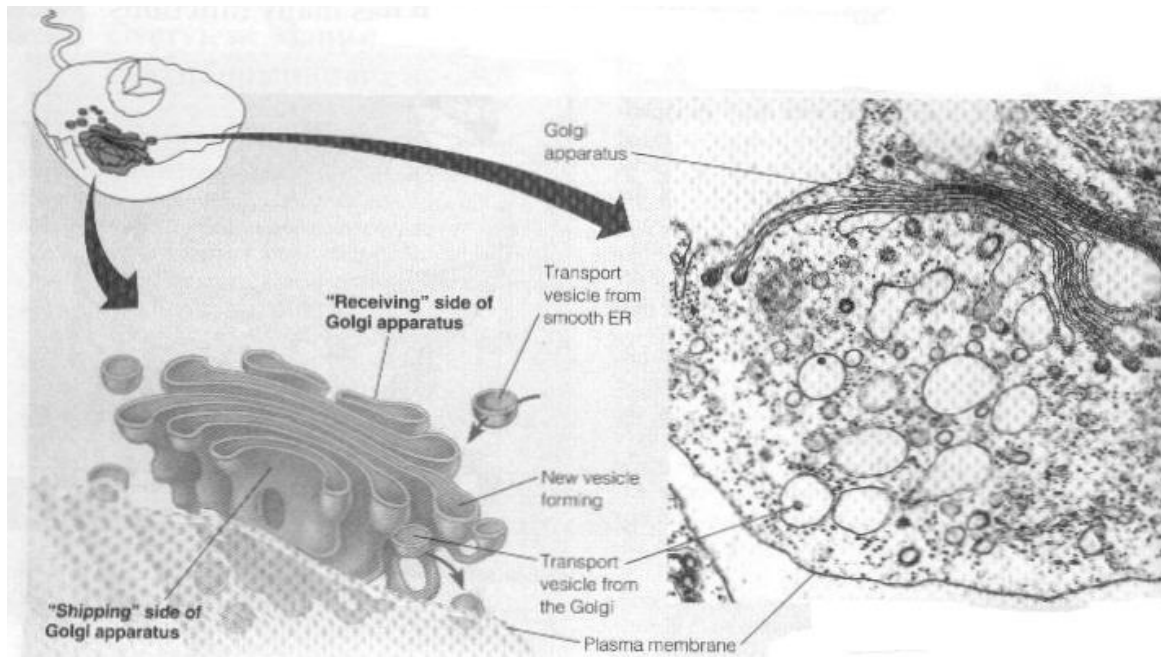


Figure 5-11 The endoplasmic reticulum is actually a series of channels that transport materials throughout the cell. Which type of endoplasmic reticulum has ribosomes attached to its surface?



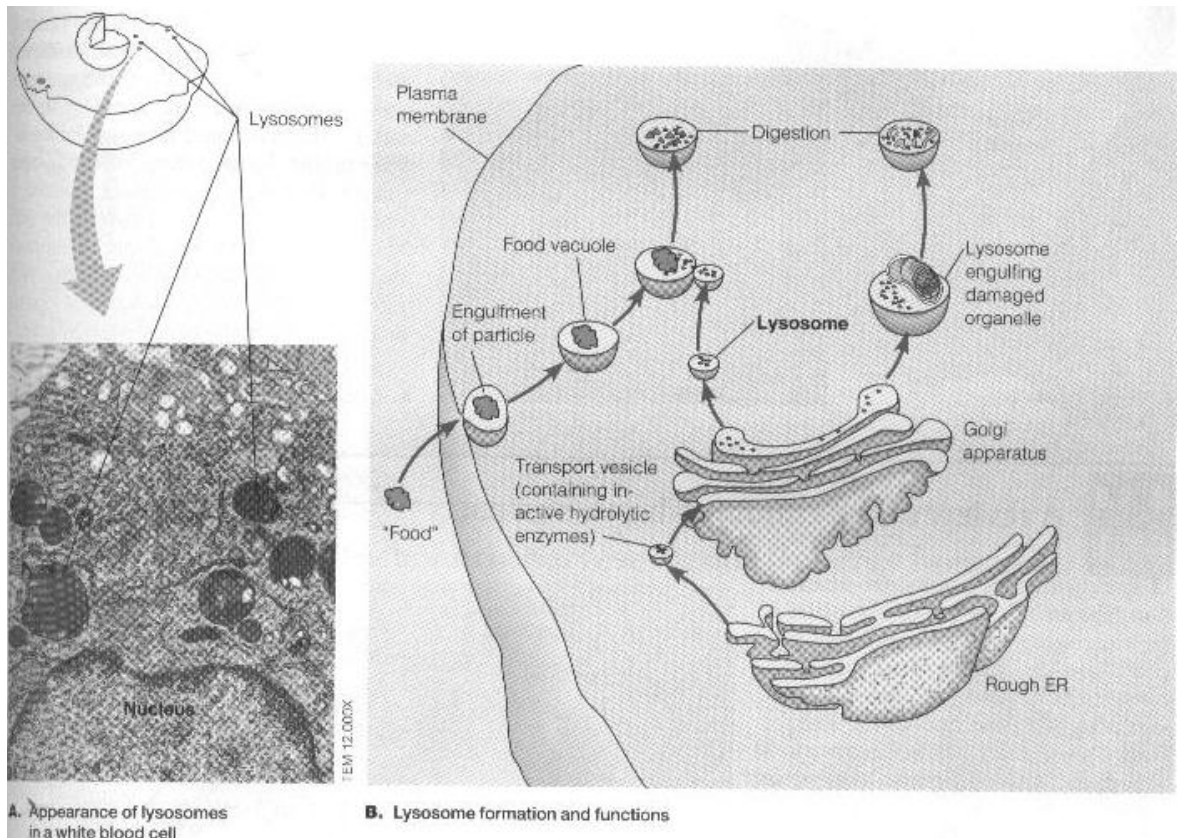
Ribosomes make proteins. Endoplasmic reticulum are a network of channels that transports materials throughout the cell. smooth ER store chemicals and rough ER have ribosomes attached that make proteins, that are inserted into the rough ER to be modified.

The Golgi Apparatus



Proteins from ER are moved to the Golgi apparatus for modification (accessorizing). Proteins are then released from the cell, or take a place within the cell.

The Lysosome



Lysosomes are the cleanup crews that digest engulfed food particles. A food vacuole will engulf food particles at the plasma membrane surface and deposit it to the lysosome. Lysosomes also digest damaged organelles.

Plastids, like the chloroplast, are organelles in plants that store food & pigments.