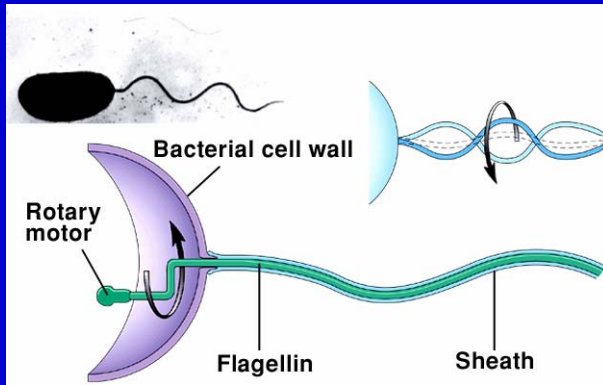


Bacteria often have **flagella** with a single protein core (flagellin) that they can use to move in a rotary corkscrew like fashion

The rotary motor of prokaryotic flagella is powered by proton flow through the cell membrane.

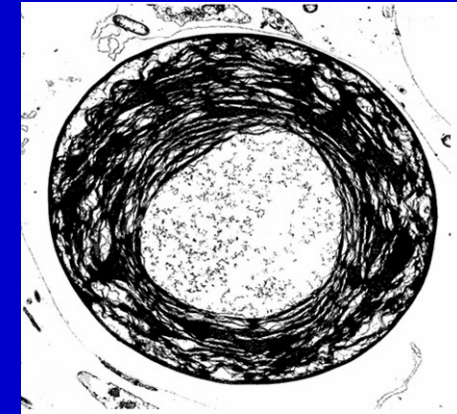
Rotating structures are rare in nature.



9

Membrane enclosed spaces allow cell functions to be compartmentalized and isolated from other functions. Prokaryotes lack membrane enclosed spaces in their cytoplasm.

Some prokaryotes are photosynthetic. The biochemical machinery for trapping light energy is contained within a highly folded plasma membrane.

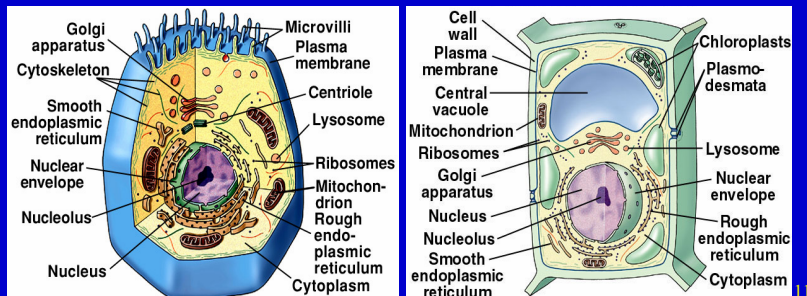


10

Eukaryotic cell structure

larger, with a typical plasma membrane - some with a cell wall
Many _____ and other interior spaces enclosed by membranes:

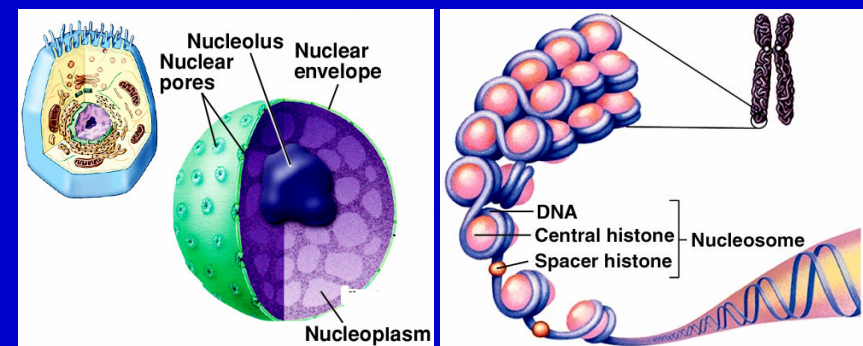
Nucleus, Endoplasmic reticulum, Golgi apparatus, Mitochondria, Chloroplasts, Lysosomes, Vacuoles, Vesicles
Cytoplasm with a **cytoskeleton** - protein tubules and fibers
cell wall found in plants (cellulose), fungi (chitin), some protists



11

Cellular Organelles

Nucleus - the largest and most obvious membrane bound compartment - controls cell activities
contains the **nucleolus** - a darkened region where ribosomal RNA is synthesized
contains **chromosomes** - consist of DNA wrapped around proteins



12