

Structure and functions of prokaryotic cell

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What is a Cell?

- Cell – Basic unit of living things.

Organisms are either:

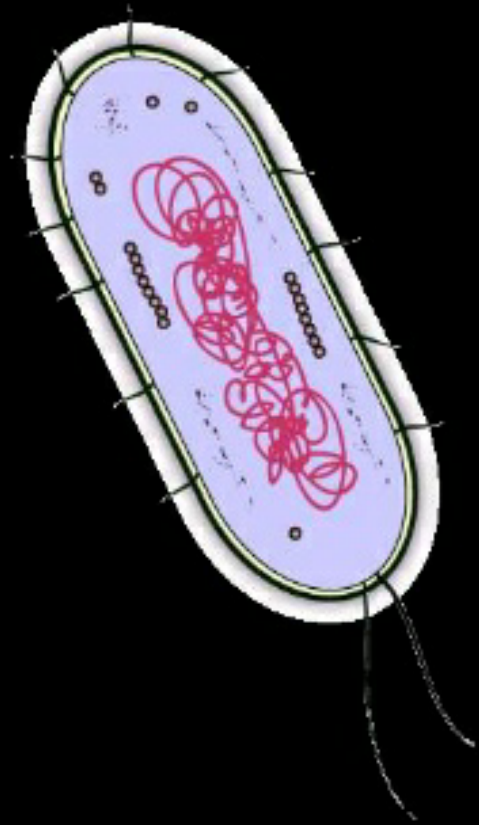
- Unicellular – made of one cell such as bacteria and amoeba.

OR

- Multicellular – made of many cells such as plants and animals.

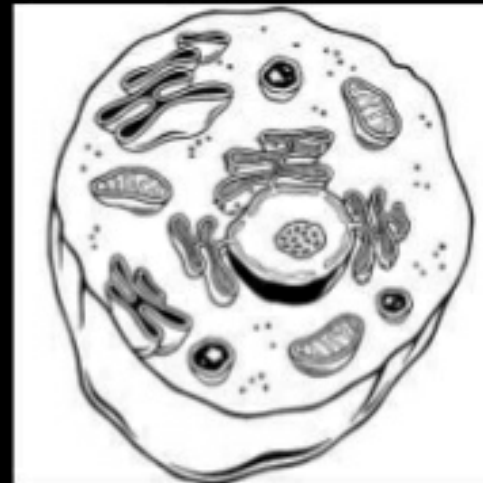
Prokaryotic Cells

- In Greek:
 - Pro = before
 - karyotic = nucleus
- Cells that do not have a nucleus
- Bacteria



Eukaryotic Cells

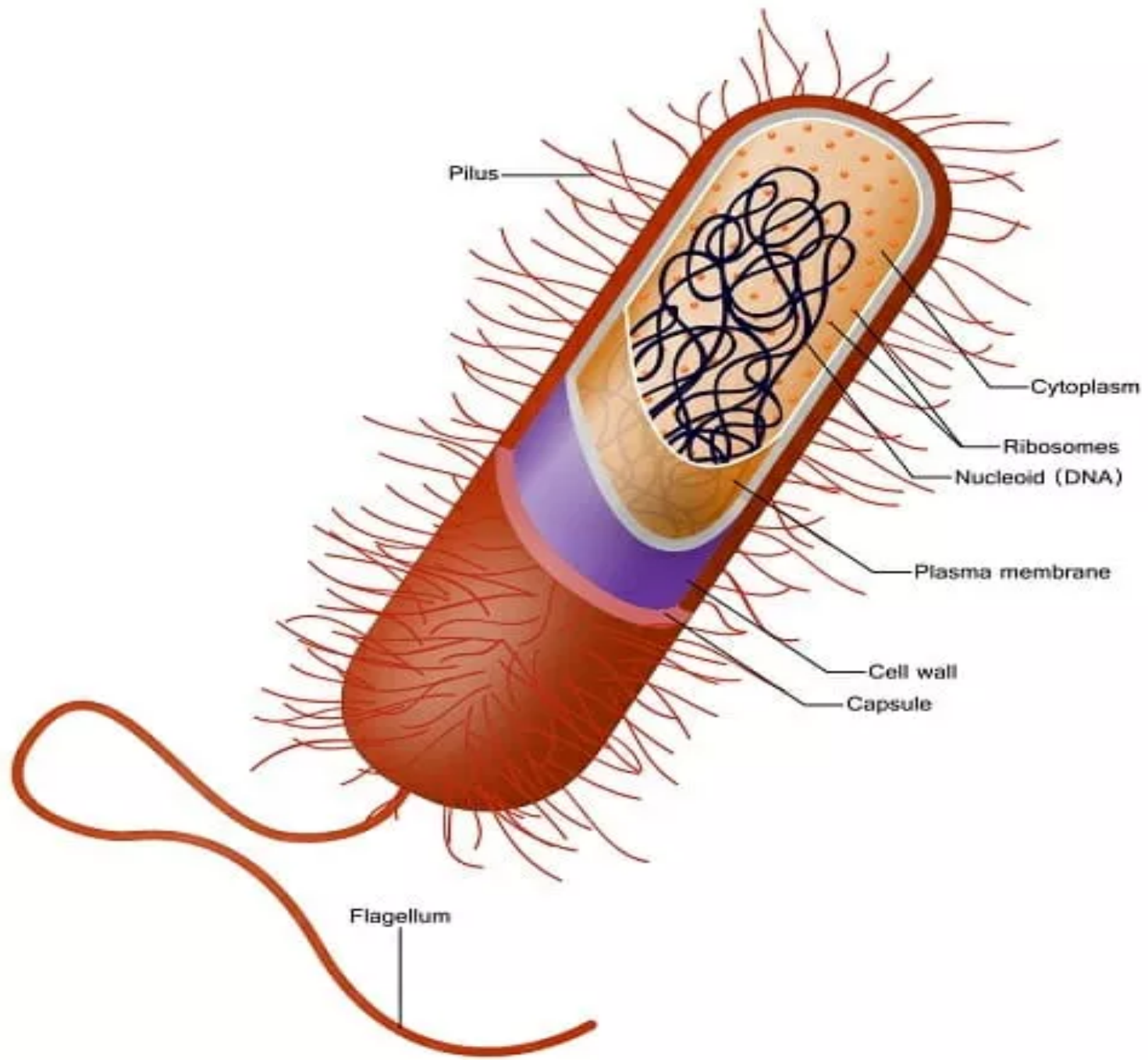
- In Greek:
 - Eu = True
 - Karyotic = nucleus
- Cells that have a nucleus



Prokaryotic vs Eukaryotic

No Nucleus	Nucleus
No Membrane – covered Organelles	Membrane – covered Organelles
Circular DNA (in a circle)	Linear DNA (in a line)
Bacteria	All other cells

Prokaryotic Cell



Parts of a Prokaryotic cell

1. Capsule

- Outermost protein covering
- Functions: Virulence, attachment to other bacteria

2. Cell wall

- Covers the plasma membrane
- Rigid layer helps in protection
- Cell communication, transport of solutes

3. Plasma membrane

- Covers the cytoplasm
- Cell communication & transport of solutes

4. Cytoplasm

- Gel like fluid inside plasma membrane
- All the organelles are suspended in it

5. DNA

- Circular DNA which stores the genetic information and acts like the brain of the cell

6. Ribosome

- Small spherical structures responsible for protein synthesis

7. Pili & Flagellum

- Cilia like or tail like organelles for locomotion of the cell
- Extension of the plasma membrane

- *Thank*
- *You*