STRUCTURE OF BACTERIA

STRUCTURE

- Bacteria are minute microscopic organism .
- They can be seen in light microscope but electron microscope is required for the study of their structure.

1. Cell wall
2. Cell membrane
3. Cytoplasm
4. Nucleoid or incipient nucleus
5. Plasmid or episome
6. Flagella or pilli

CELL WALL

- Each bacterial cell is covered by a thick and rigid cell wall.
- The rigidity of cell wall is due to the presence of murein or peptidoglycans.
- Slime absorbs water and swells to from a thick and rigid layer around cell wall which is known as capsules.
- It is a protective layer.
- Capsule is made up of dextran, dextrin, leavan and small amount of cellulose.

CELL MEMBRANE

- Protoplasm of bacteria is surrounded by a lipoprotein membrane.
- It just on inner side of the cell wall.
- On cell membrane respiratory enzymes are present which bear components of electron transport system and functionally resemble with mitochondria of eukaryotic.

CYTOPLASM

- The colourless, transparent, dense mass of substance enclosed by plasma membrane other than DNA is called as cytoplasm.
- It consists of salt, carbohydrates, amino acid, fats, coenzyme and volutin granules.
- It contains 70s ribosomes, vacuoles, mesosomes, etc.
- But cytoplasmic organelles such as plastids, mitochondria, endoplasmic reticulum are not found in them.

NUCLEOID OR INCIPIENT NUCLEUS

- Bacterial cells do not have an organized nucleus.
- Nuclear membrane and nucleolus are absent, hence it is called nucleoid.
- There is one circular strand of DNA attached to the cell membrane at a point.
- The basic proteins called histones are absent.
- Thus, bacterial DNA is naked.

PLASMID OR EPISOME

- The cytoplasm of bacteria contain some extranuclear circular DNA other than nuclear DNA, which are called as plasmid.
- When these plasmids get associated with bacterial genome then , it is called as episome.

FLAGELLA AND PILI

- A typical bacterium may have one, two or many flagella.
- The basal structure of flagellum lies in the cell membrane where it can rotate.
- It helps the bacteria to move.