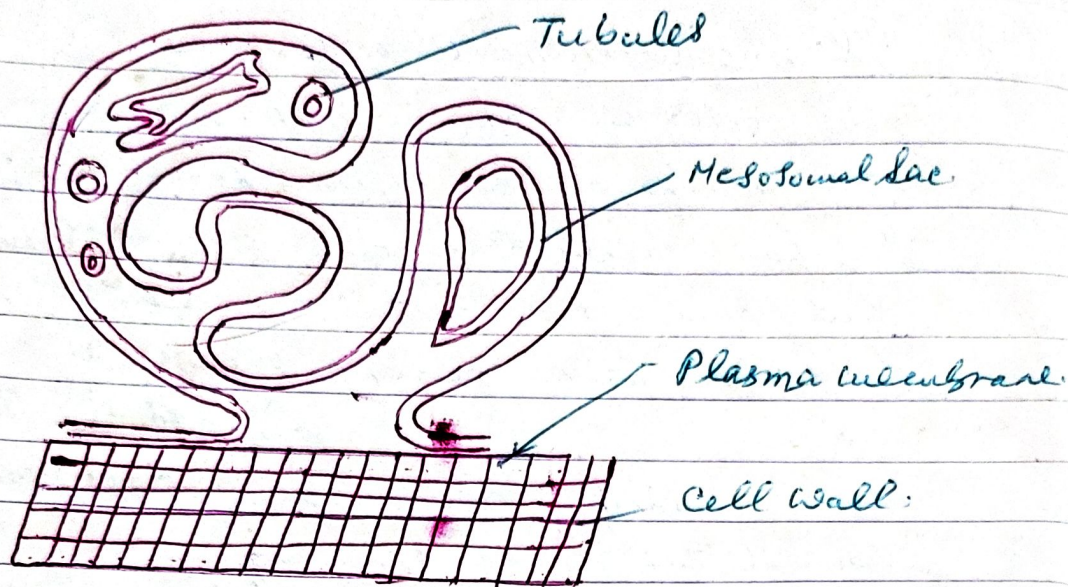


(69)

Diagram of
Mesosome.

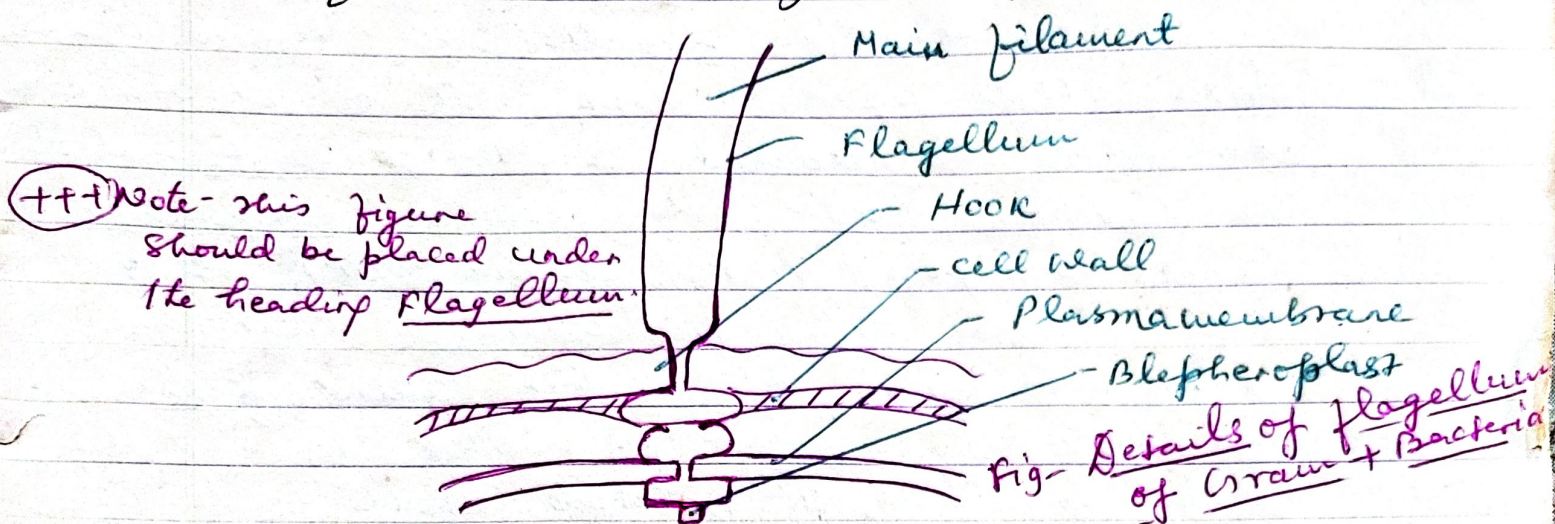


④ Cytoplasm → It mainly consists of ground plasma and ribosomes:-

① Ground plasma → It is a liquid consisting of salts, sugar, amino acid, vitamin, soluble proteins and deposits of lipid granule. It doesn't contain Endoplasmic reticulum, Golgi body, Lysosomes, Mitochondria etc. Only ribosomes are prominently observed.

Ribosomes - A bacterial cell contains about 10,000 ribosomes which constitute 30% of the total weight of the cell. Its chemical composition shows that it is made up of 30 to 50% protein and 50-70% RNA. They are found freely in the cytoplasm but it may form clusters. Then it is termed as polysomes. Each ribosome measures about 20 μ m in diameter and contains two units. The upper smaller unit is represented by 30S and the lower bigger unit is of 50S. The sedimentation coefficient of such ribosome is 70S.

which is the characteristic of prokaryotic ribosomes. It is slightly smaller than Eukaryotic. Its function is in protein synthesis.



FLAGELLUM → It is a whip like structure which measures 4 to 5 micron long and 120 Å wide. It is made up of three parts -

- 1) Basal granule.
- 2) Hook
- 3) Main filament.

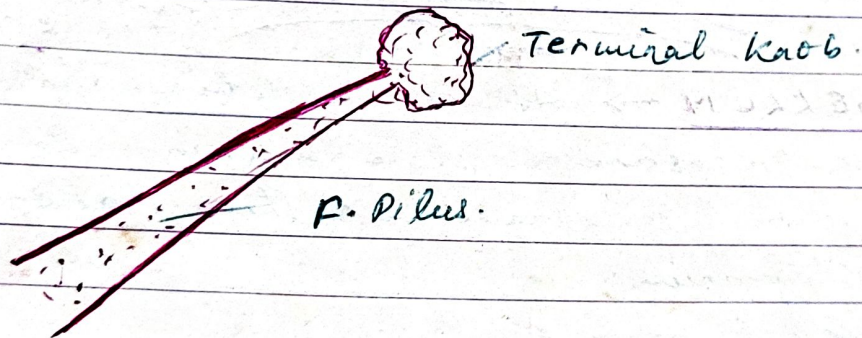
It is actually an extension of the cell membrane protruding through a cell wall. Its base is hooked and attached with Blepharoplast.

Its chemical analysis indicates that it contains single protein named as flagellin.

They are associated with the movement which is in longitudinal move like action.

Fig. ↑↑
+++ up

Pili → [Fimbriae] → Many Gram⁻ bacteria have some hair like out growth called pili given off from the surface. These appendages are shorter and straighter than flagella. Its thickness varies from 75 to 100 Å. In some pili a knob like structure is attached called as F. pili. In certain cases, it acts as Conjugation Canal (Sex pili) through which DNA of one cell passes into the other. It contains only one type of protein called pilin.



⑤ Nucleoid → In the nucleus of Bacterial cell, there is absence of Nuclear membrane, Nucleolus and chromosomes. Only DNA is present called as Nucleoid or Chromatin body. It consists of single, very large, DNA double helix which is generally ~~irregular~~ circular in outline. DNA ring is highly folded and is attached to plasma membrane at one point. In addition to Adenine, Guanine, Cytosine and Thymine, it also contains small amount of Methylated bases as - 6-methyl amino purine. It don't contain histone.