

BASIC MICROBIOLOGY

2. Spirilla

They have rigid spiral structure. Spirillum with many turns can superficially resemble spirochetes. They do not have outer sheath and endoflagella, but have typical bacterial flagella.

Example: *Campylobacter jejuni*, *Helicobacter pylori*, *Spirillum winogradskyi*, etc.

3. Spirochetes

Spirochetes have a helical shape and flexible bodies. Spirochetes move by means of axial filaments, which look like flagella contained beneath a flexible external sheath but lack typical bacterial flagella.

Examples: *Leptospira* species (*Leptospira interrogans*), *Treponema pallidum*, *Borrelia recurrentis*, etc.

Others Shapes and Arrangements of Bacteria

1. Filamentous Bacteria

They are very long thin filamentshaped bacteria. Some of them form branching filaments resulting in a network of filaments called 'mycelium'.

Example: *Candidatus Savagella*

2. Star Shaped Bacteria

Example: *Stella*

3. Rectangular Bacteria

Examples: *Micrococcus* spp (*H. vanis mortis*, *H. marismortui*)

4. Pleomorphic Bacteria

These bacteria do not have any characteristic shape unlike all others described above. They can change their shape. In pure cultures, they can be observed to have different shapes.

Examples: *Mycoplasma pneumoniae*, *M. genitalium*, etc.

BACTERIAL ANATOMY

Bacteria, despite their simplicity, contain a well-developed cell structure which is responsible for many of their unique biological structures. Many structural features are unique to bacteria and are not found among bacteria or eukaryotes. Because of the simplicity of bacteria relative to larger organisms and the ease with which they can be manipulated experimentally, the cell structure of bacteria has been well studied, revealing many biochemical principles that have been subsequently applied to other organisms.