KINGDOM PROKARYOTAE / MONERA & KINGDOM PROTISTA

Kingdom: Monera/Prokaryotae

Characteristics of Kingdom Monera/Prokaryotae

1. They are single-celled prokaryotes

2. Some are anaerobes while others are aerobes

3. They have a thick and rigid cell wall made up of amino acids and polysaccharides

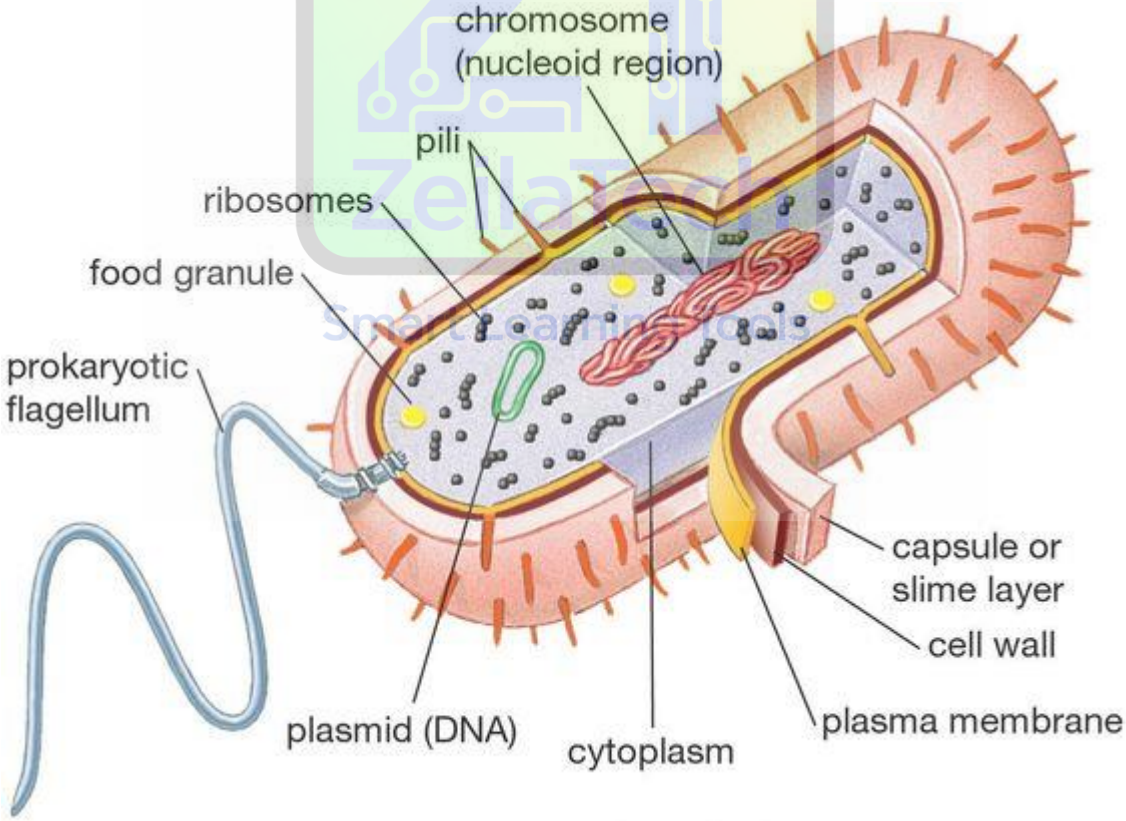
4. The organisms are non-motile or move by the beating of simple flagella or by gliding.

4. Some are autotrophic e.g blue-green algae, others are heterotrophic

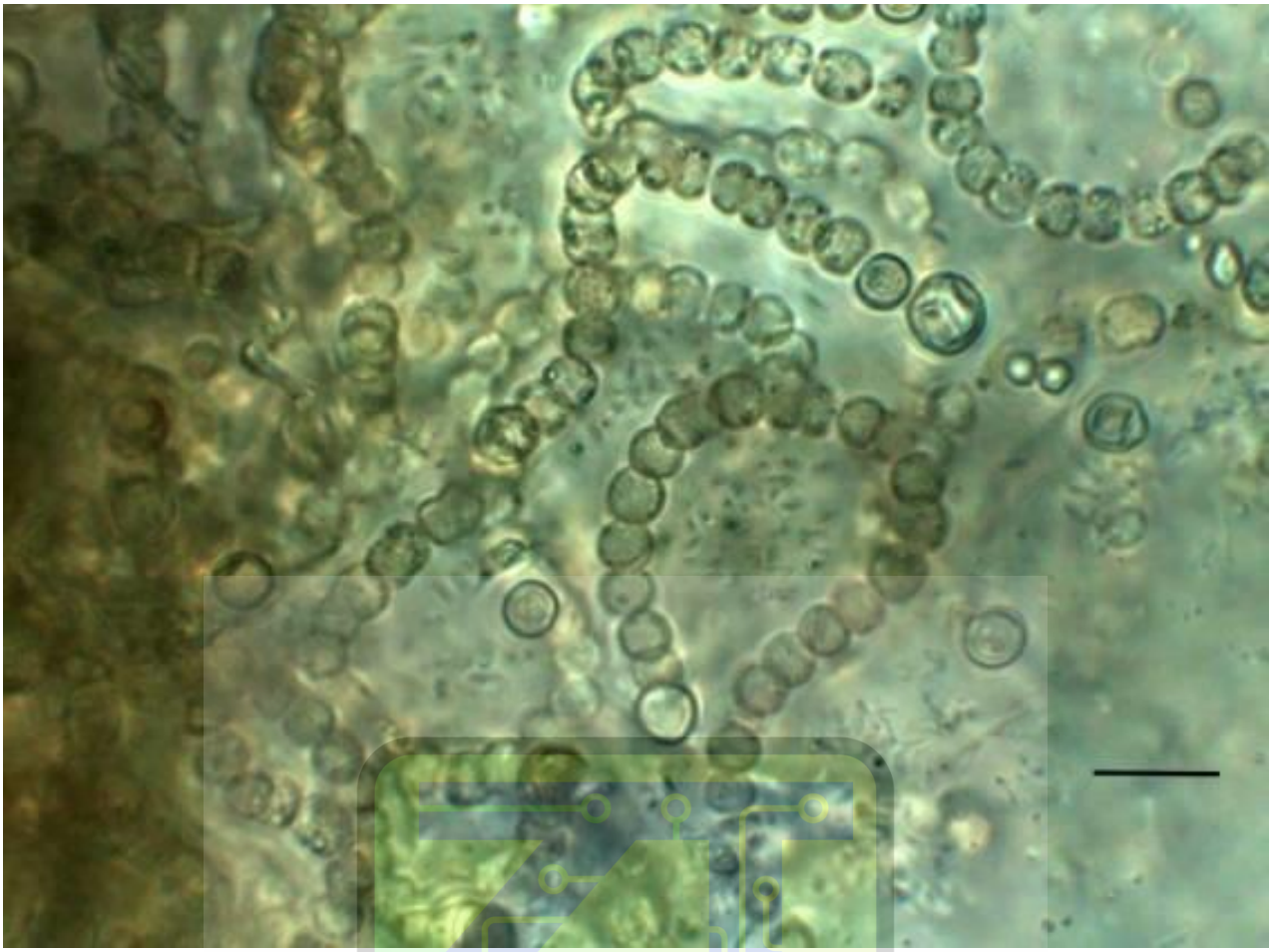
5 They lack the following cell organelles; mitochondria, chloroplasts, endoplasmic reticulum

6. The cell does not have an organised nucleus with a nuclear envelope

7. They reproduce by asexual means, examples are Bacteria. Binary fission is the process through which asexual reproduction happens in bacteria. other examples include E.coli, Clostridium sp, and blue-green algae



Bacterium cell



Nostoc

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Kingdom: Protista

1. They are all eukaryotes and single celled.

2. Members of this kingdom move by various means: e.g Amoeba uses Pseudopodia, Paramecium uses cilia while Euglena uses Flagella

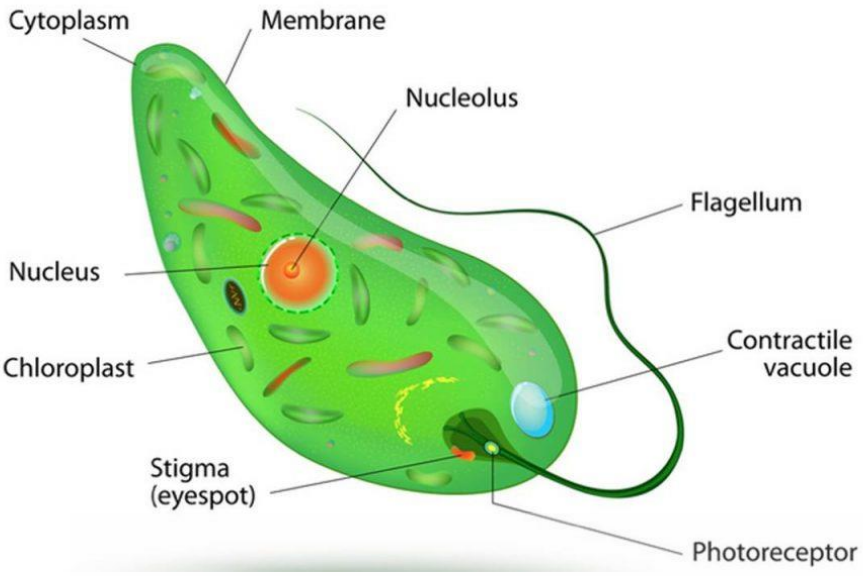
3. They are microscopic organism.

4. Mode of nutrition is variable: Autotrophic or Heterotrophic
Examples of heterotrophs are Amoeba, paramecium
Examples of autotrophs are Euglena, Spirogyra, Chlamydomonas

5. They reproduce asexual by binary fission, multiple fission, spore formation, budding

6. They reproduce sexually by conjugation (a primitive form of sexual reproduction where individuals exchange genetic materials.
Examples are Amoeba, Paramecium, Euglena, etc.

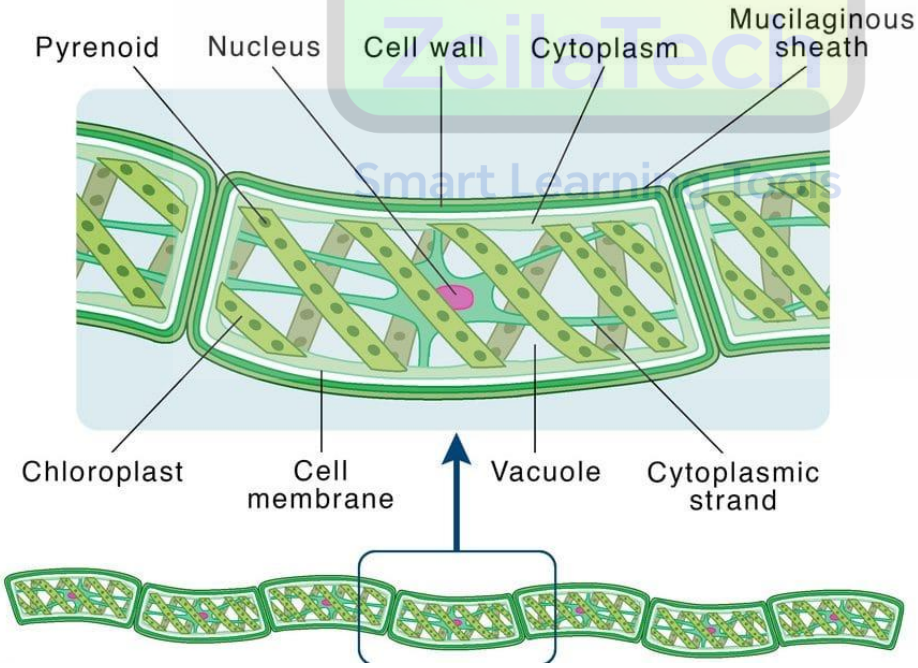
7. Some cause serious diseases, such as malaria and amoebic dysentery



Euglena

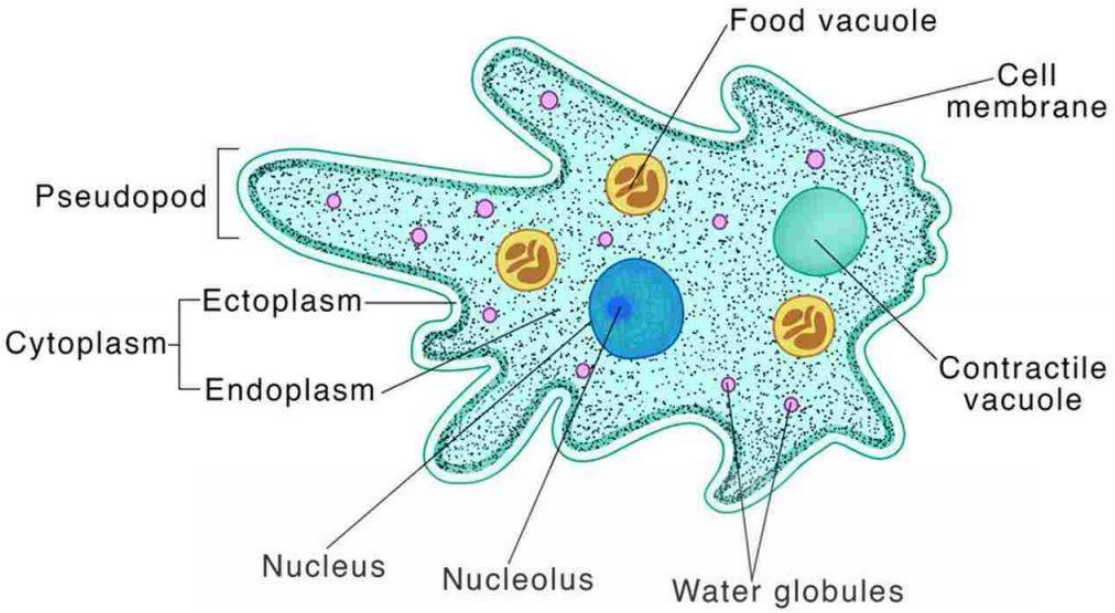
Organisms in this kingdom are called protists. They are similar to plants, animals, fungi but do not have the same characteristics as them. They can be divided into plant-like protist, animal-like protist and fungus-like protist

Plant – like protist – Protophyta e.g Algae such as Chlamydomonas, Spirogyra, volvox, pendorina, Diatoms

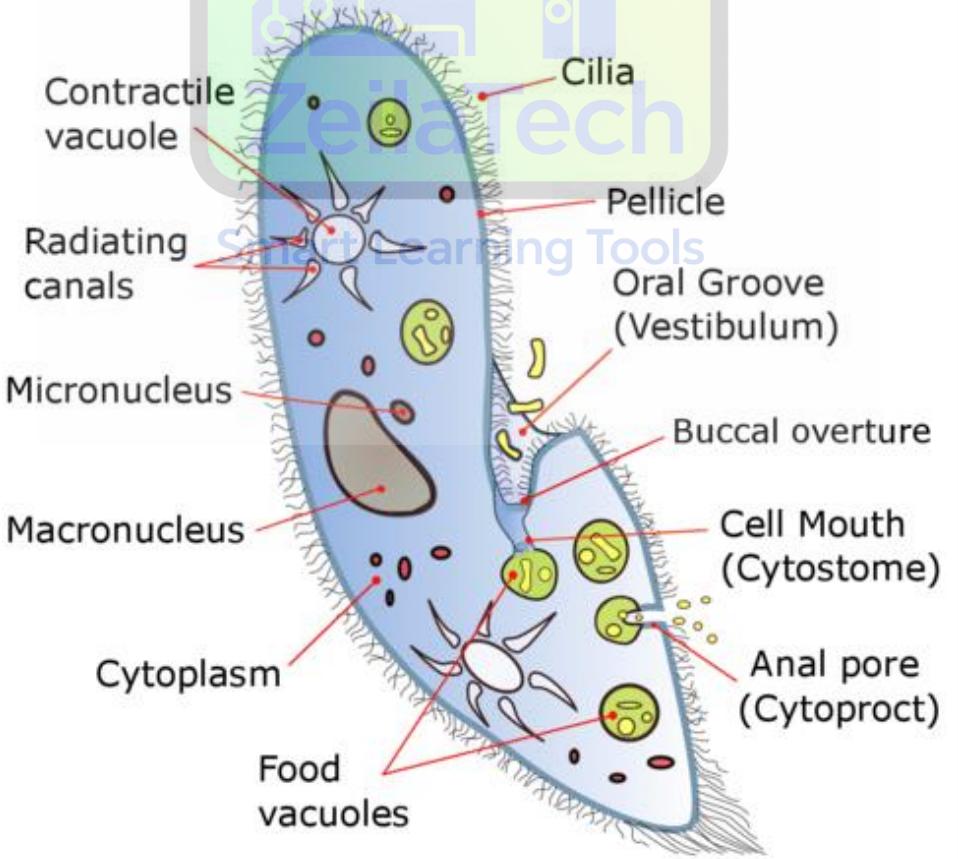


Spirogyra

Animal – like protist; Protozoa e.g Amoeba, Paramecium, Trypanosome, Plasmodium



Amoeba



Paramecium

Fungus–like Protist; Myxomycota & Oomycota (slime & water moulds)

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