K: Protista

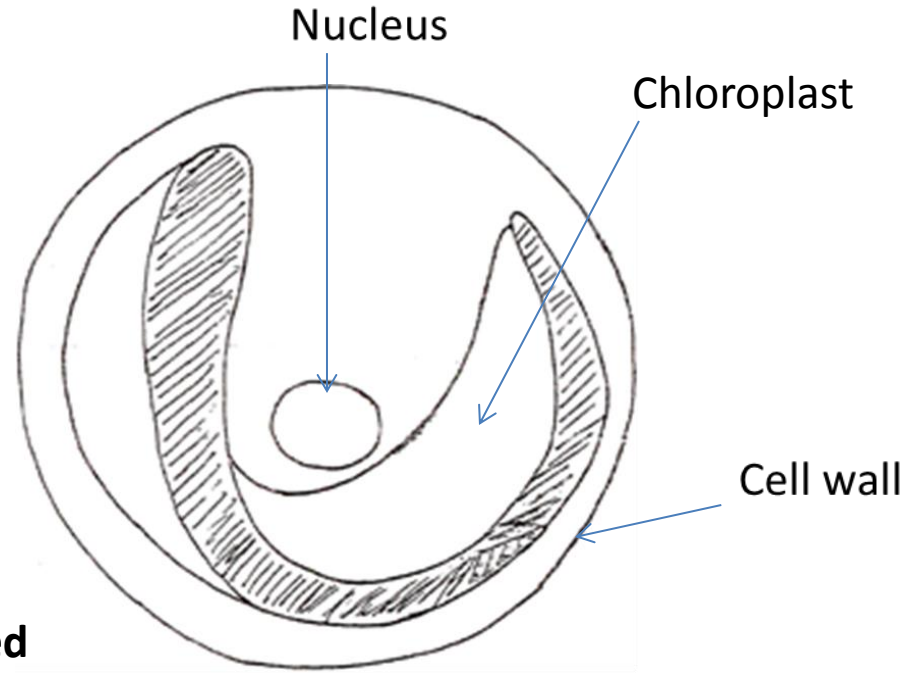
D: Chlorophyta

Cl: Chlorophyceae

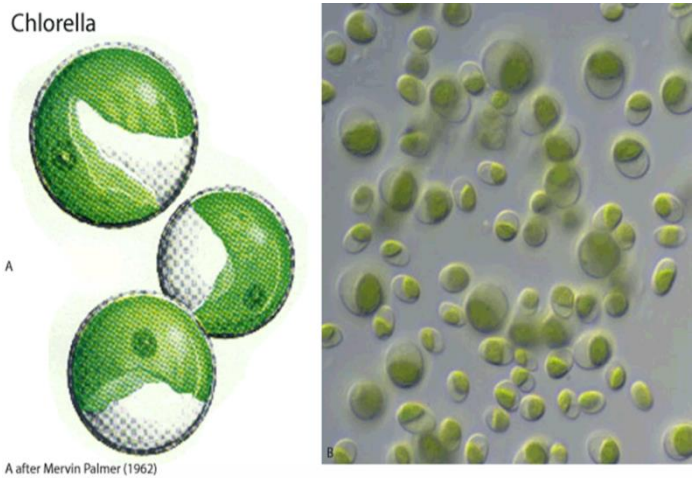
Or:Chlorococcales

F:Chlorellaceae

Ex: *Chlorella* sp.



Chlorella sp. **are tiny, spherical, single-celled green algae with a rigid, multi-layered cell wall, a large central chloroplast containing chlorophyll, a nucleus, and often a pyrenoid.**



A after Mervin Palmer (1962)
B © National Institute for Environmental Studies, see http://www.nies.go.jp/biology/mcc/home.htm

K: Protista

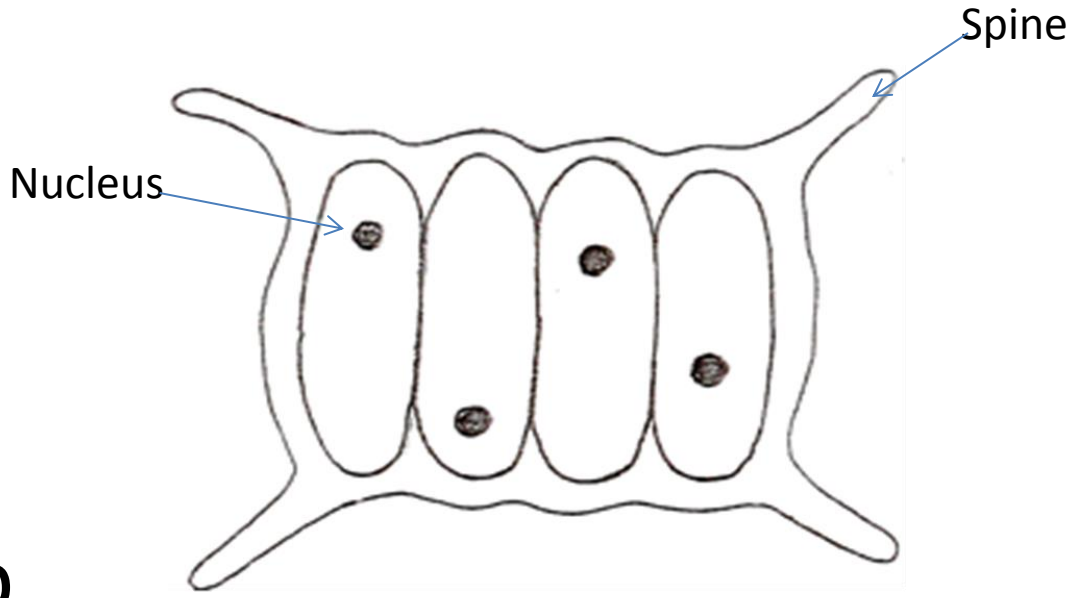
D: Chlorophyta

Cl: Chlorophyceae

Or:Chlorococcales

F:Scenedesmaceae

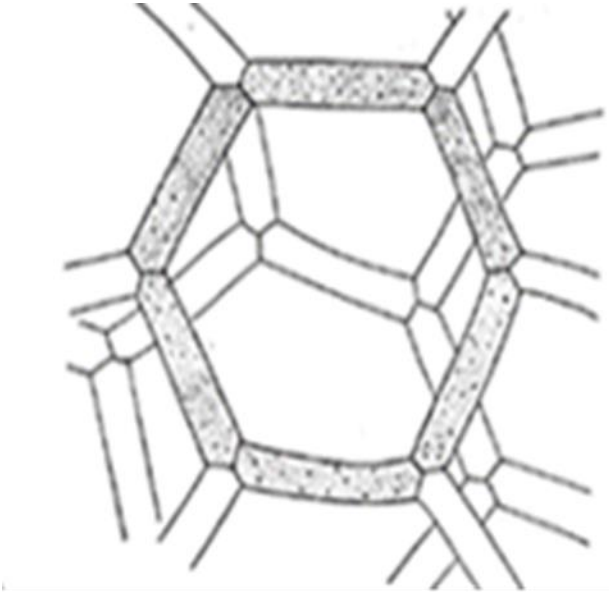
Ex: *Scenedesmus* sp.



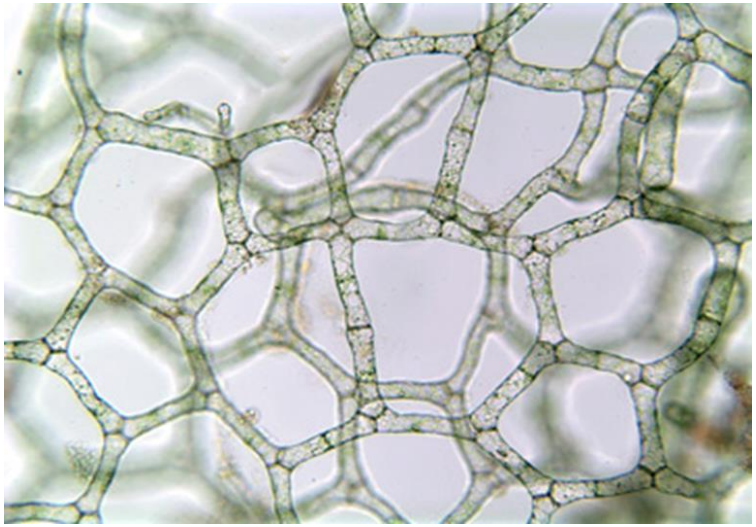
a common freshwater green microalga known for forming colonies of 4-8 cells, high photosynthetic ability, rapid growth, and excellent potential for wastewater bioremediation (removing pollutants) and biofuel production (biodiesel) due to its protein, carbohydrate, and lipid content.

a distinct, multi-layered cell wall with inner cellulose and outer algaenan/sporopollenin layers, often with spines or warts, and each cell contains a single chloroplast and pyrenoid.

K: Protista •
D: Chlorophyta
Cl: Chlorophyceae
Or:Chlorococcales
F:Hydrodictyaceae
Ex: *Hydrodictyon* sp.



large, cylindrical, multinucleate cells forming a distinctive hexagonal or pentagonal reticulate net, resembling a green mesh , appearing as a macroscopic, free-floating colony in freshwater.



K: Protista

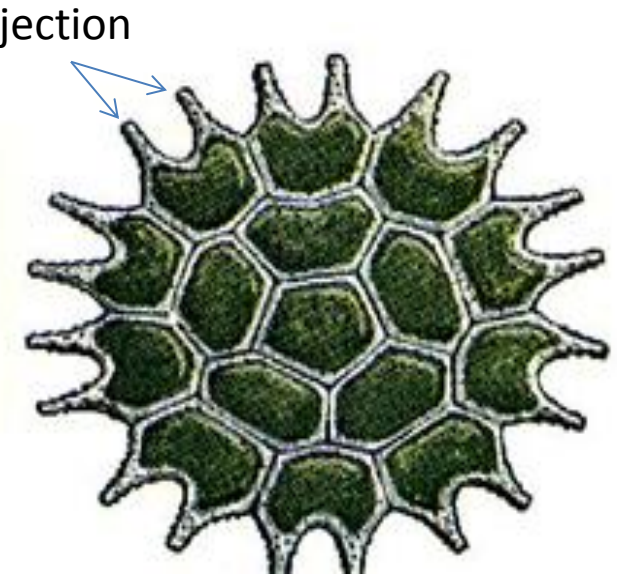
D: Chlorophyta

Cl: Chlorophyceae

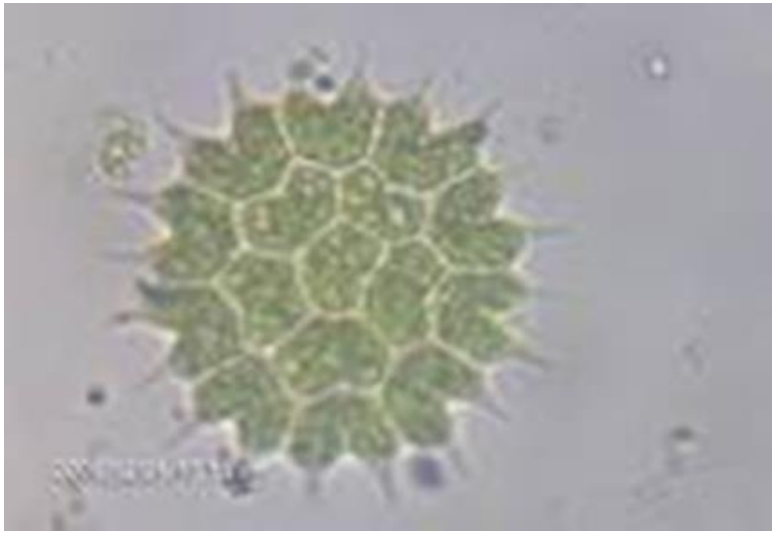
Or:Chlorococcales

F:Hydrodictyaceae

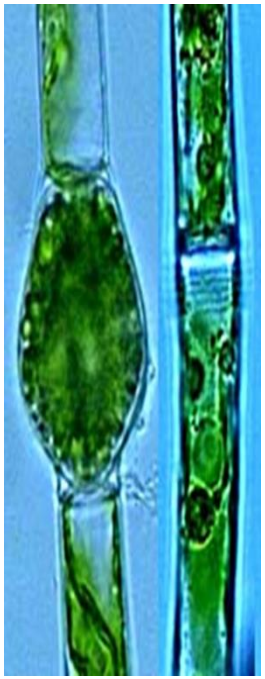
Ex: *Pediastrum* sp.

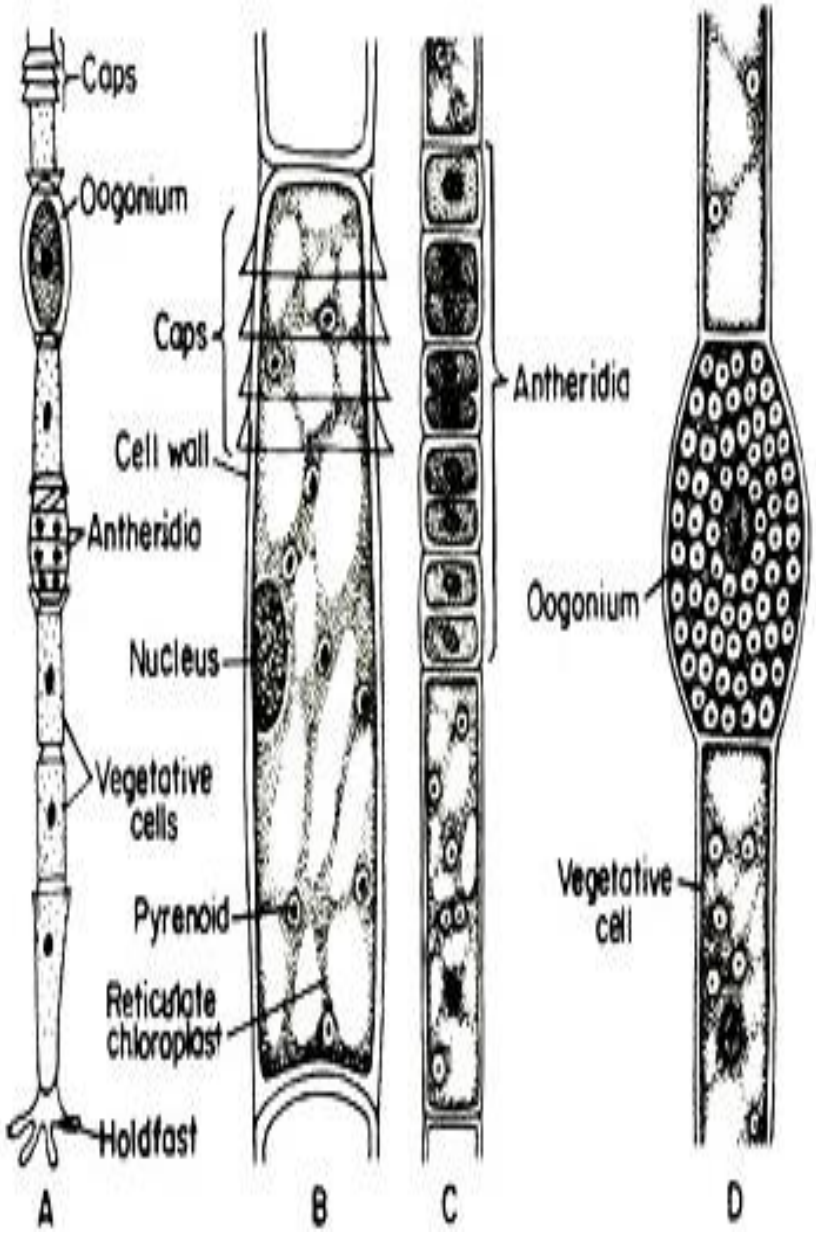


forms flat, circular colonies called coenobia with a fixed number of cells, typically arranged in a single layer with interior and peripheral cells, often featuring distinctive horn-like projections on the outer cells, and a complex cell wall with varied surface.



K: Protista
D: Chlorophyta
Cl: Chlorophyceae
Or: Oedogoniales
F: Oedogoniaceae
Ex: *Oedogonium sp.*





Oedogonium is a genus of unbranched, filamentous green algae forming long strands of cylindrical cells, characterized by unique apical caps from cell division, a holdfast for attachment, and specialized reproductive cells (antheridia , oogonia) that enable sexual reproduction, with asexual reproduction by zoospores.