

Part - I  
Paper - 1st  
Zoology (H)  
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## Leucosolenia (Histology)

- Leucosolenia is a simplest, marine, sessile and colonial sponge
- Its cylindrical body has a central spongocoel or gastrovascular cavity.
- It has many inlets called ostia, and a large outlet called osculum.
- Its body wall is diploblastic, having epidermis & endodermis.
- Epidermis -  
It's made of scale like flat-cells called pinacocytes and contractile cells or porocytes. Porocytes have intracellular canals open outside by ~~ostia~~ osculum.
- Endodermis.  
- It is made of collar cells or choanocytes. It bears a flagellum, which is surrounded by a funnel like periplasmic collar.
- Mesenchyme:  
It's made gelatinous layer, which calcareous spicules or skeleton and a wandering amoebocytes. It's of following types.
  - Archaeocytes - these are undifferentiated embryonic cells. It can change into any other type of cell and also produce sex cells, known as Totipotent → (Totipotent)
  - Collenocytes - These are connective tissue with branching pseudopodia. It unites to form a syncytial network.
  - Trophocytes - These are nourishing cells & supply nutrition.
  - Thesocytes :- These are storage cells, which store reserve food.



- Chromocytes: These are pigmented cells having pigment granules.
- Scleroblast: These are spicules (skeleton) secreting cells.
- Gland cells: - They secrete adhesive/slime substances, which helps in attachment with bottom or substratum.
- Myocytes: - These are contractile cells.
- Germ cells - These are gametes (sperm & ova) producing cells.