

Plant Histology

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(14)

Secretory Systems in Plants

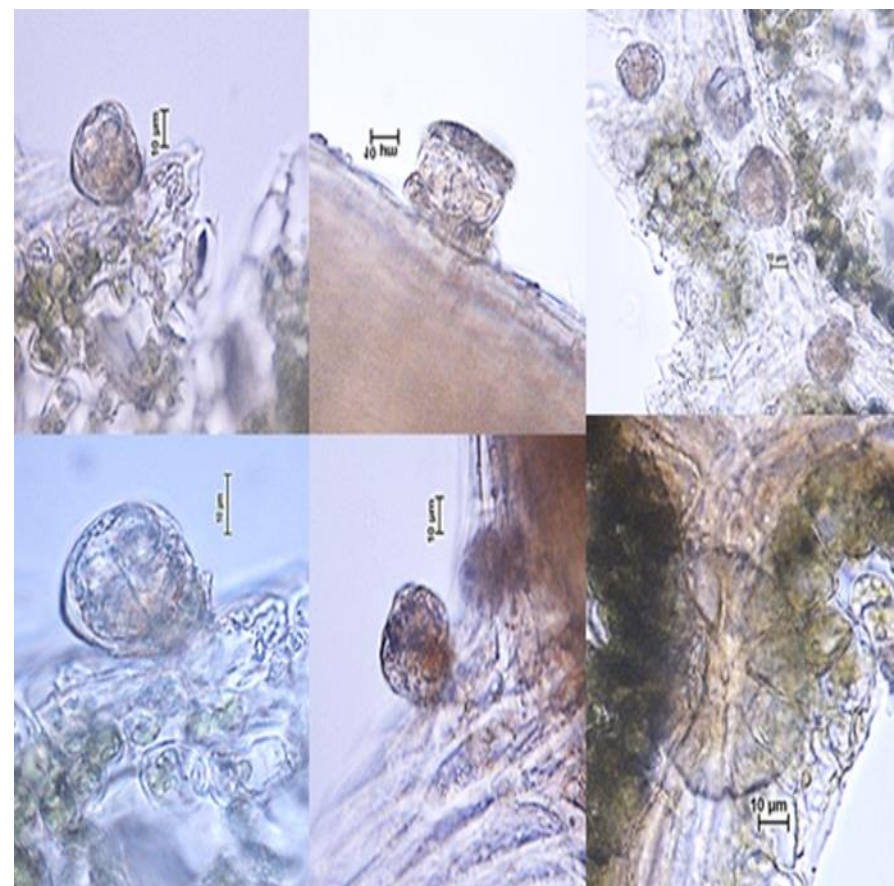
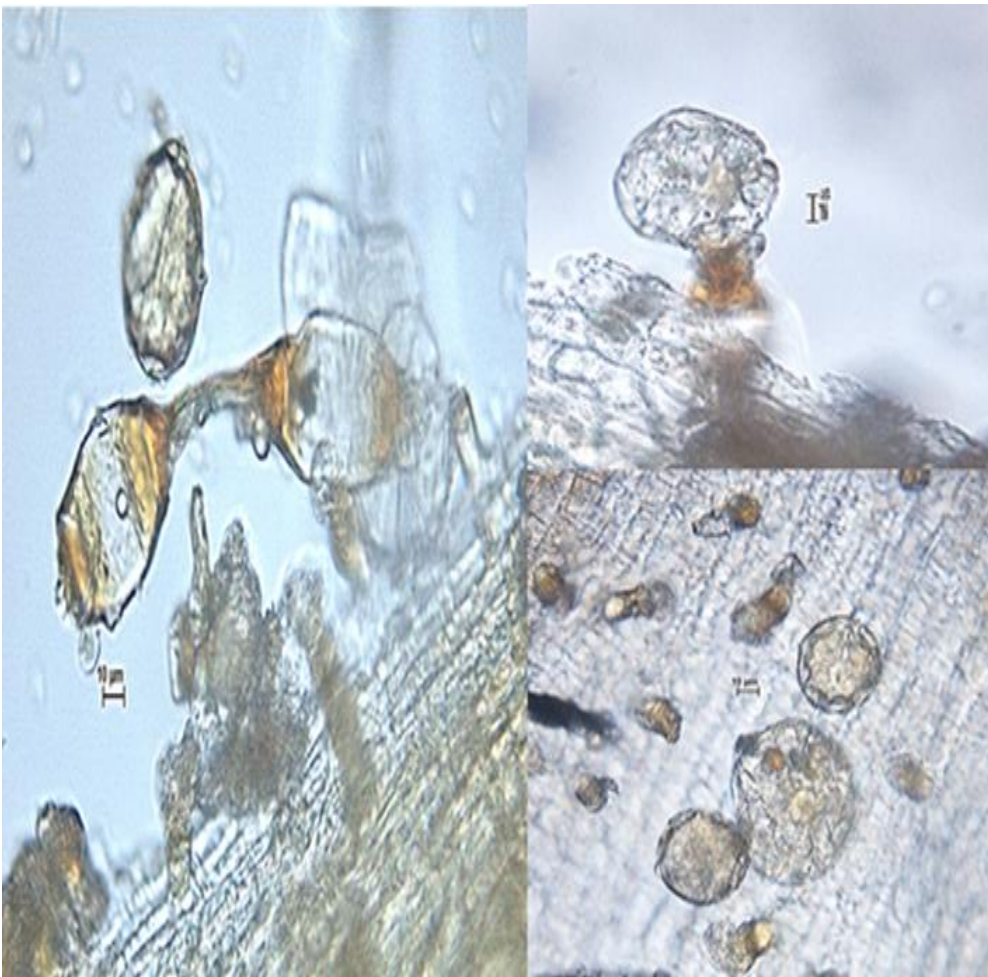
Classification of secretory structures:

1. External Secretory Structures

----Glandular trichomes

Glandular trichomes are involved in secreting various substances such as water, mucilage, terpenes, salts, nectar, digestive enzymes.

They can also be classified on the basis of number of cells (*unicellular / multicellular*) and layers (*uniseriate / multiseriate*).



2. Internal secretory structures

Secretion can be carried out internally by single cells, by small groups of cells, or by a whole tissue.

Internal secretory cells

The internal secretory cells are specialized secretory cells called as *secretory idioblasts*. These secretory cells are enlarged in length as known *sacs* or *tubes*.

Types of internal secretory cells

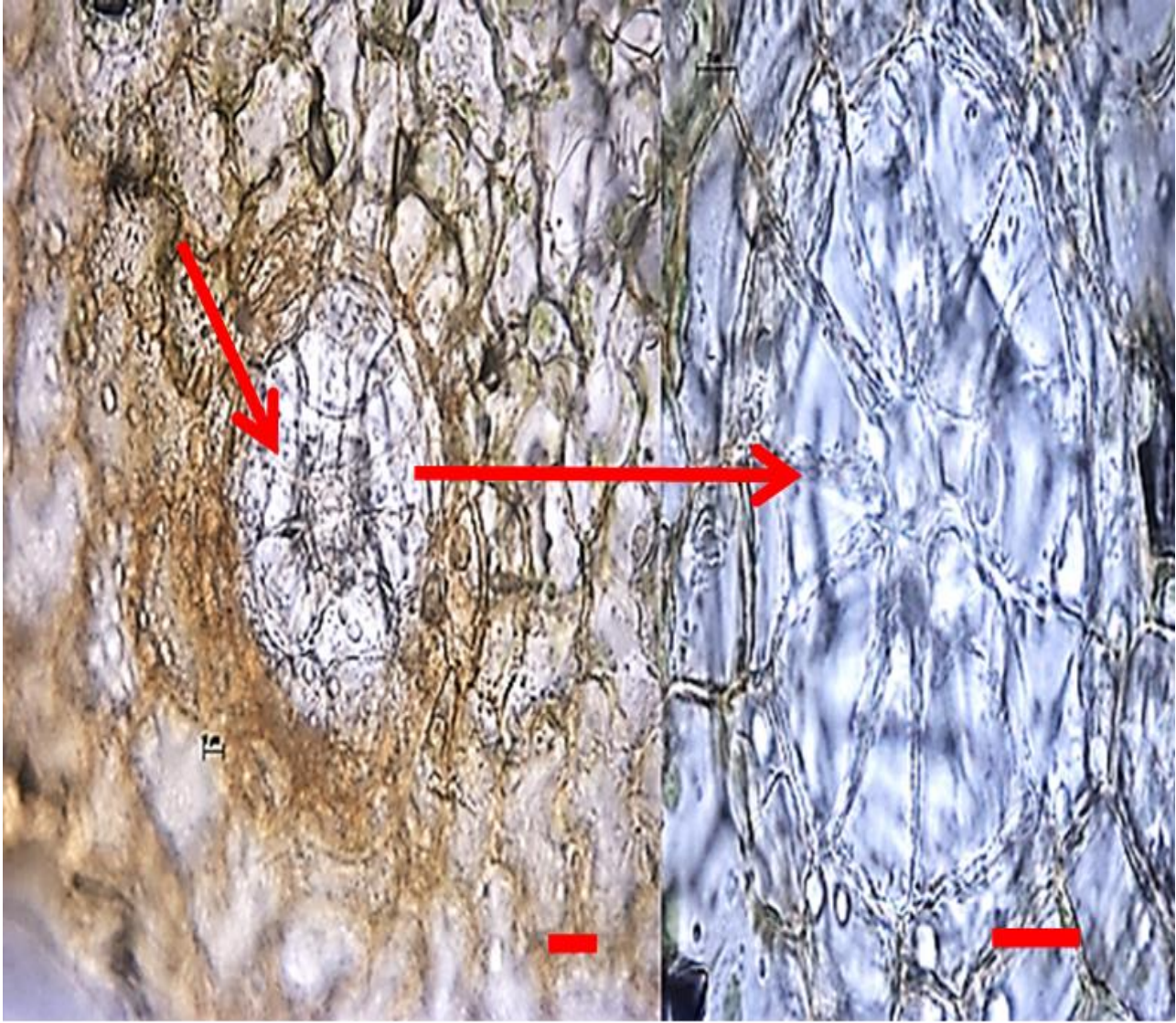
- Crystals and silica secreting cells
- Lithocysts
- Myrosin cells
- Mucilage cells
- Tannin idioblasts
- Secretory cavities and ducts

Schizogenous cavities and ducts

Resin ducts

Lysigenous cavities and ducts

Schizolysigenous cavities and ducts



Laticifers

Laticifers are grouped into two major classes on the basis of their structure:

- 1. Articulated laticifers**
- 2. Nonarticulated laticifers**
- 3. Articulated nonanastomosing laticifers**
- 4. Articulated anastomosing laticifers**
- 5. Non-articulated unbranched laticifers**
- 6. Non-articulated branched**

