Introduction to microscopy & tissue staining

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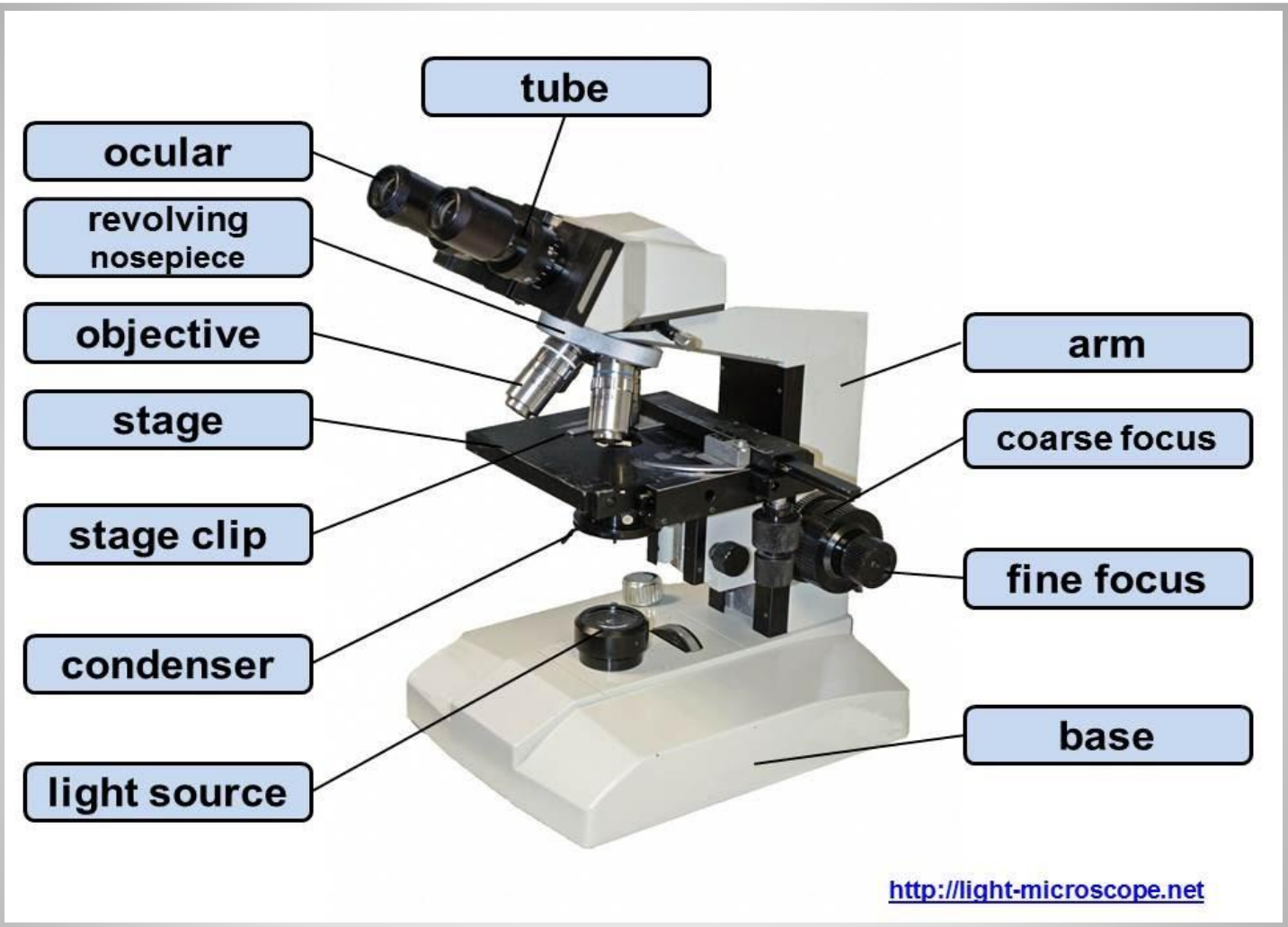


Parts of Microscope

Steps in the processing of tissues

1. Fixation – preservation of tissues in its original condition.
2. Dehydration – removal of water from tissues.
3. Clearing – infiltration of paraffin solvent.
4. Embedding – infiltration of paraffin wax.
5. Microtomy – preparing thin slices of tissues.
6. Staining – colouring of tissues.
7. Mounting – arranging tissues on slides.

According to their affinity for certain tissue components.

Acidic dyes

Acid dyes usually stain basic components such as cytoplasm, acidophil granules etc.

e.g. Eosin, Acid fuchsin

Basic dyes

Usually stain acidic stain acidic components such as nucleus, basophil granules etc.

e.g. Hematoxylin, Basic Fuchsin, Methylene blue.

Neutral dyes

These consist of mixtures of basic and acidic dyes.

Both cations and anion contain chromophoric groups and both have colored radicles.

e.g. Romanowsky dyes formed by the interaction of polychrome methylene blue and eosin.

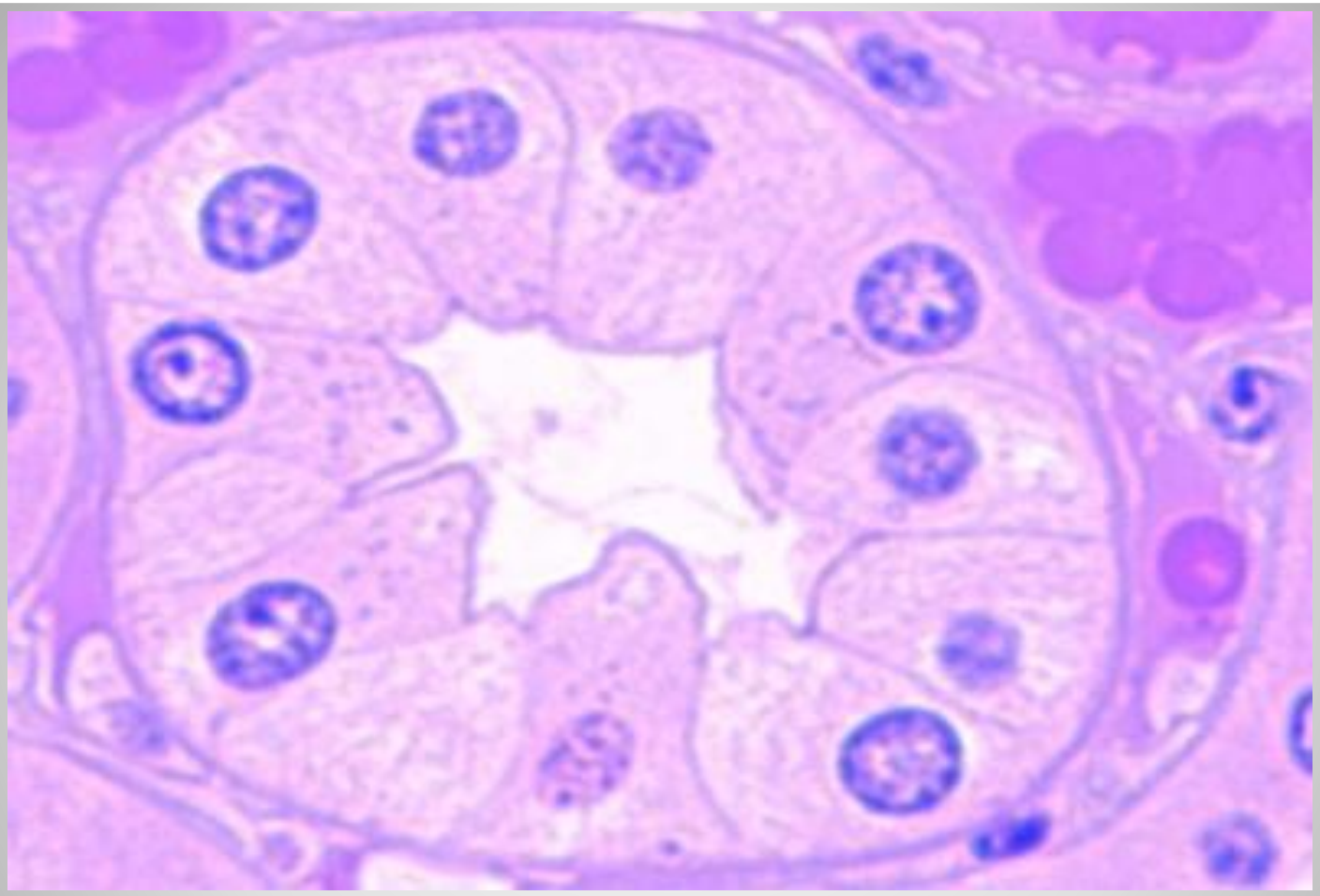
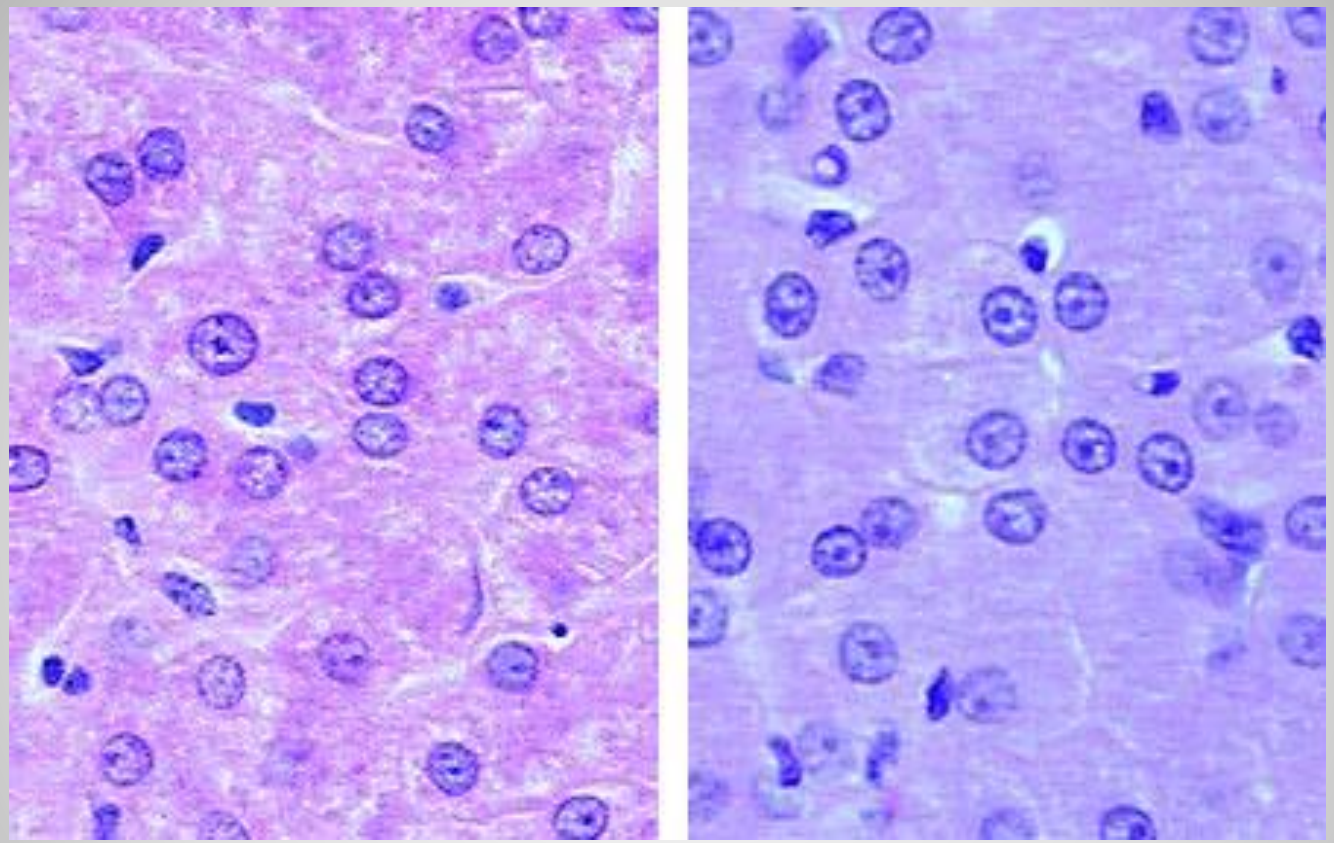


Image of H & E stain



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