

Microscopic Examination of Reproductive Structures

1. Microscope Slide of Testis

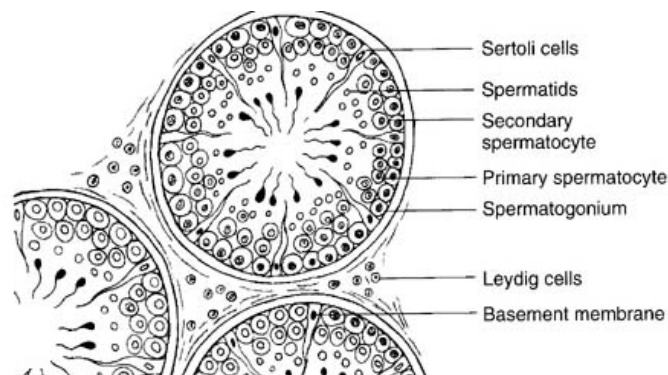
Using available resources (textbook, posters, etc.) identify the following structures on the slide.

- ♂ a) seminiferous tubule - circular structures in cross-section; site of spermatogenesis (sperm development).
- ♂ b) basement membrane - a thin membrane forming the border of each seminiferous tubule.
- ♂ c) lumen - inner cavity of the seminiferous tubule in which many developing sperm cells are found.
- ♂ d) Leydig (interstitial) cells - cells outside of seminiferous tubules; these cells release male sex hormones.
- e) Sertoli cells - found along inner border (on basement membrane) inside the seminiferous tubules; not easily visible (do not have to draw them; simply be aware that they are present); these cells nourish the maturing sperm.
- ♂ f) sperm - cells inside the lumen of seminiferous tubule; there will be sperm in various stages of development; as sperm mature, they migrate from the basement membrane into the middle of the lumen such that the most immature sperm are found at basement membrane and the most mature sperm are closest to the middle of the lumen.

Stages of Sperm Development

spermatogonium (immature) → spermatocyte → spermatid → sperm (mature)

Draw a detailed cross-section of a testis and label all structures with a ♂ sign. Follow correct biological format for the drawing.



2. Microscope Slide of Ovary/Follicle

Using available resources (text, posters, etc.) identify the following structures on the slide.

- ♀ a) mature follicle - the entire circular structure with a fluid-filled cavity which contains the developing egg (egg development is called oogenesis); these follicles are larger than the immature follicles in the ovary.
- ♀ b) oocyte/ovum - central circle in follicle; the developing egg.
- ♀ c) zona pellucida - a cytoplasmic region which encircles the oocyte/ovum; may appear light pink or clear.
- ♀ d) corona radiata - ring of cells radiating around the zona pellucida.
- ♀ e) antrum - fluid-filled cavity outside the oocyte, zona pellucida, and corona radiata.
- ♀ f) granulosa cells - ring of cells which lie just outside of the antrum; these cells release female sex hormones.
- ♀ g) theca cells - a second ring of cells just outside of the granulosa cells forming the outer border of the follicle; looks like concentric rings; these cells also release female sex hormones.

Draw a detailed cross-section of a follicle or ovary and label all structures with a ♀ symbol. Follow correct biological format for the drawing.

