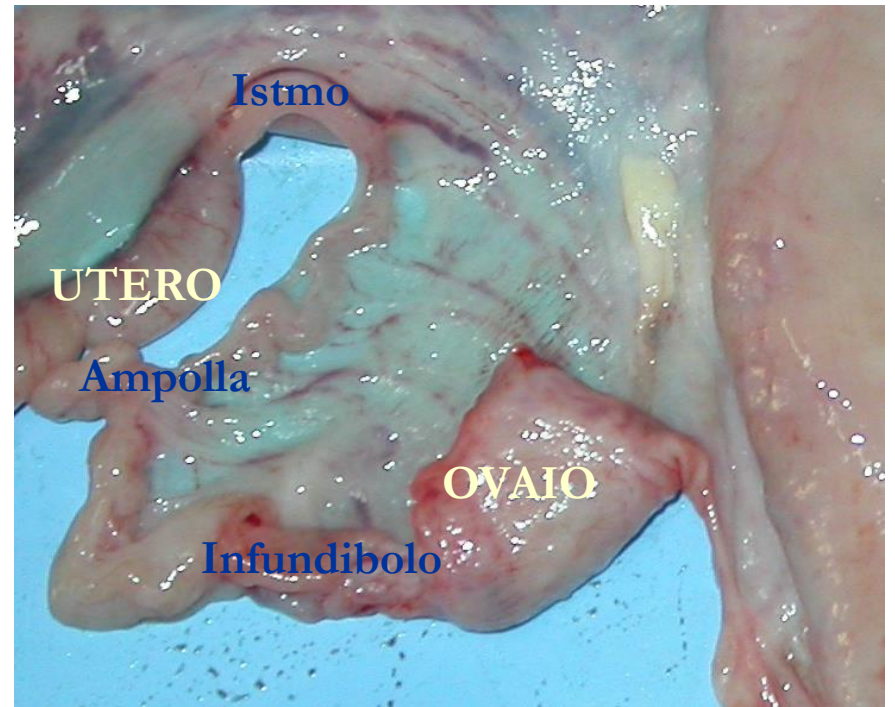
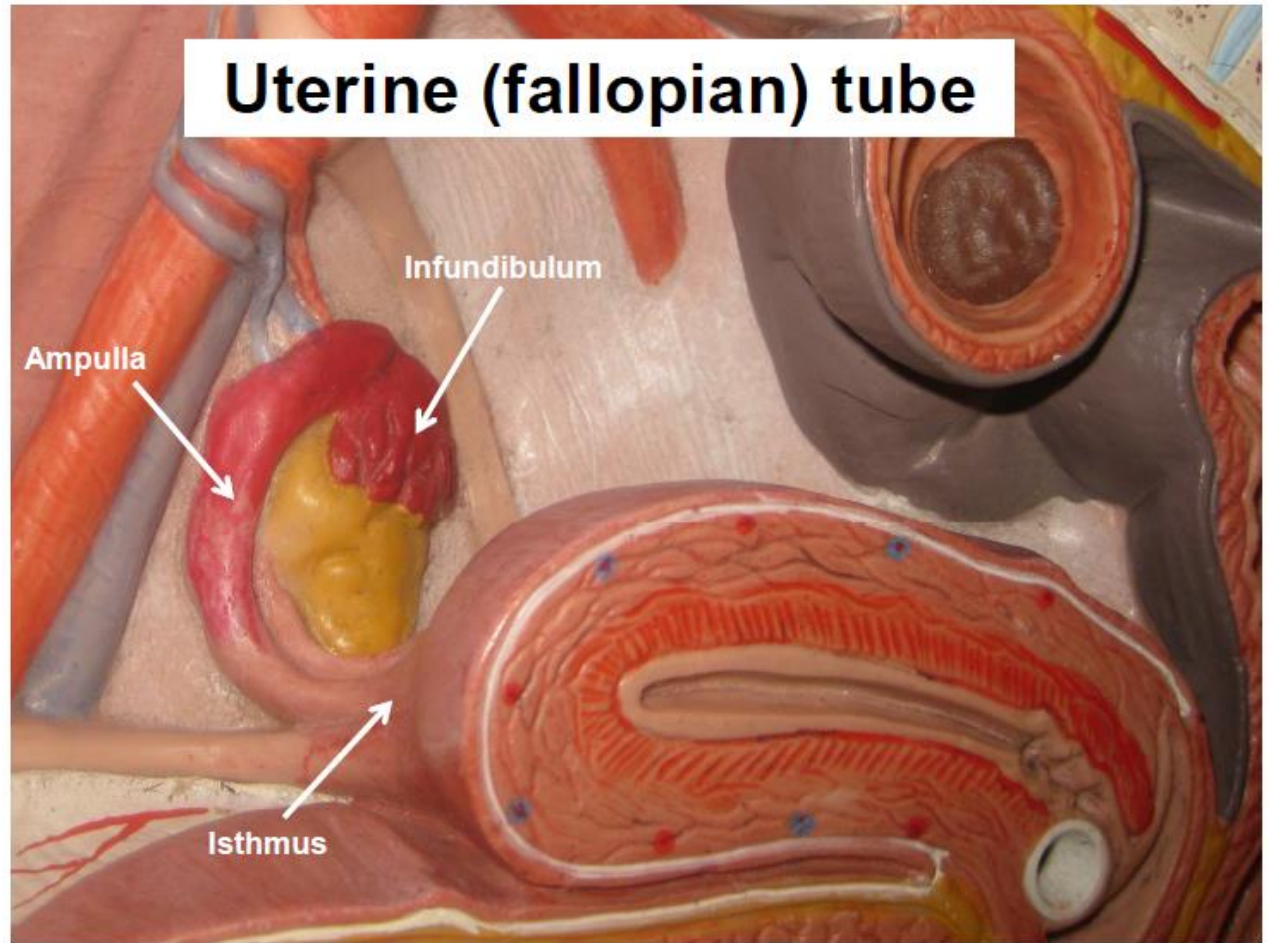


UTERINE TUBES



The uterine tubes can be divided into three major parts:

1. the infundibulum
2. the ampulla
3. the isthmus



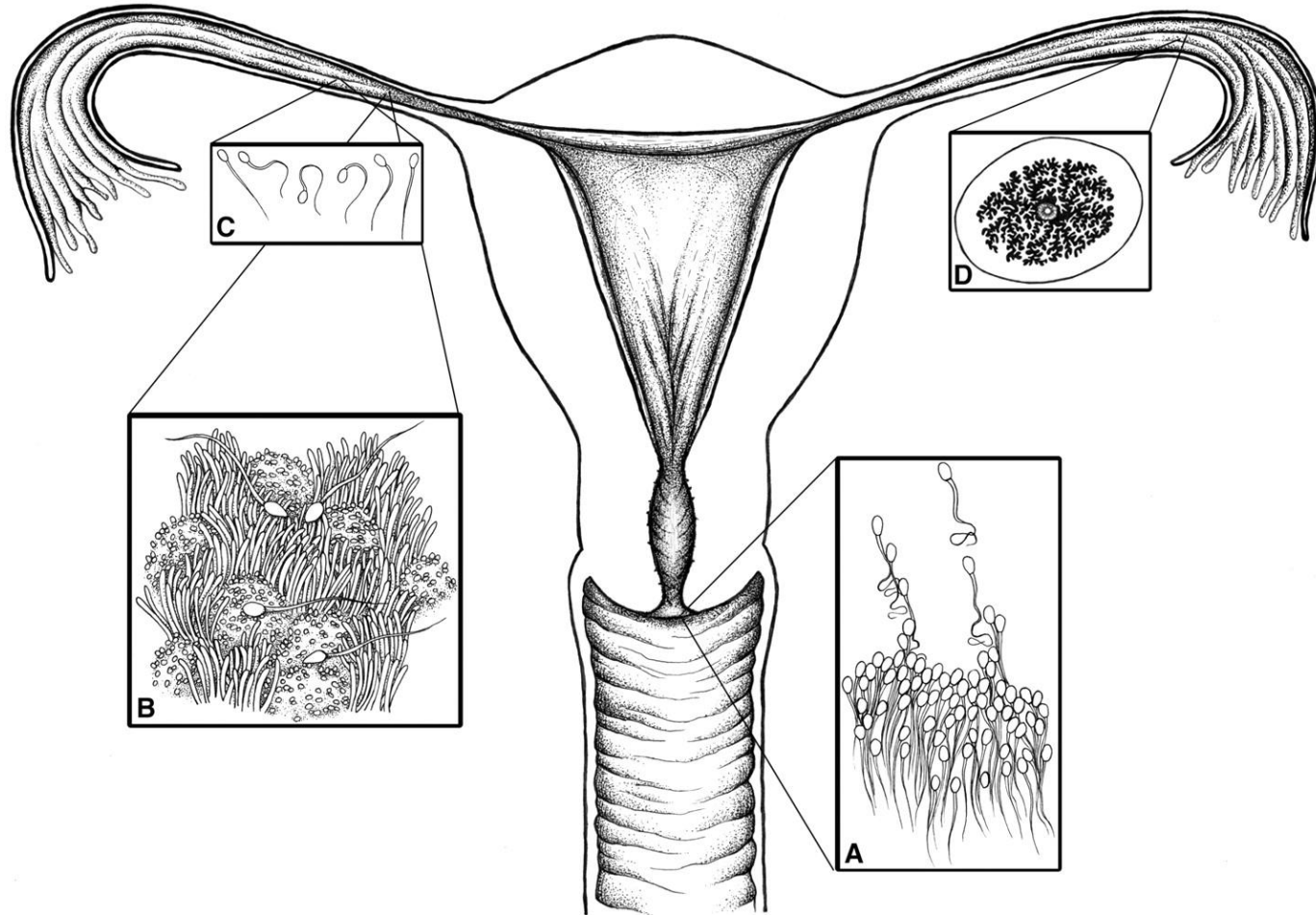
The uterine tubes (also called Fallopian tubes or oviducts):

1. transport the ovum from the ovary to the site of fertilization
2. help transport spermatozoa, the haploid male gametes, from the site of deposition to the site of fertilization
3. provide an appropriate environment for fertilization
4. transport the fertilized oocyte (embryo) to the uterine horns/uterus where implantation and further development may occur.

TRANSPORT SPERMATOZOA

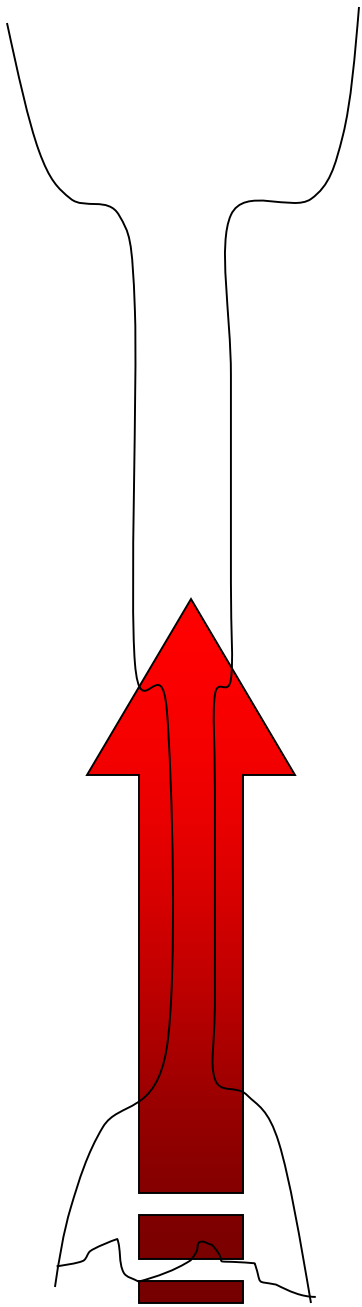
- In VAGINA: rabbits, ruminants, primates.
- In UTERUS: pig, equine, bitch.

WOMEN



Human female reproductive tract illustrating stages of gamete transport. **(A)** Sperm entering cervical mucus at external os of cervix. The mucus fills the upper half of the inset. **(B)** Sperm interacting with endosalpingeal epithelium in Fallopian tube. **(C)** Hyperactivated motility of sperm in Fallopian tube. **(D)** Oocyte in cumulus within a transverse section of the tubal ampulla.

PIG



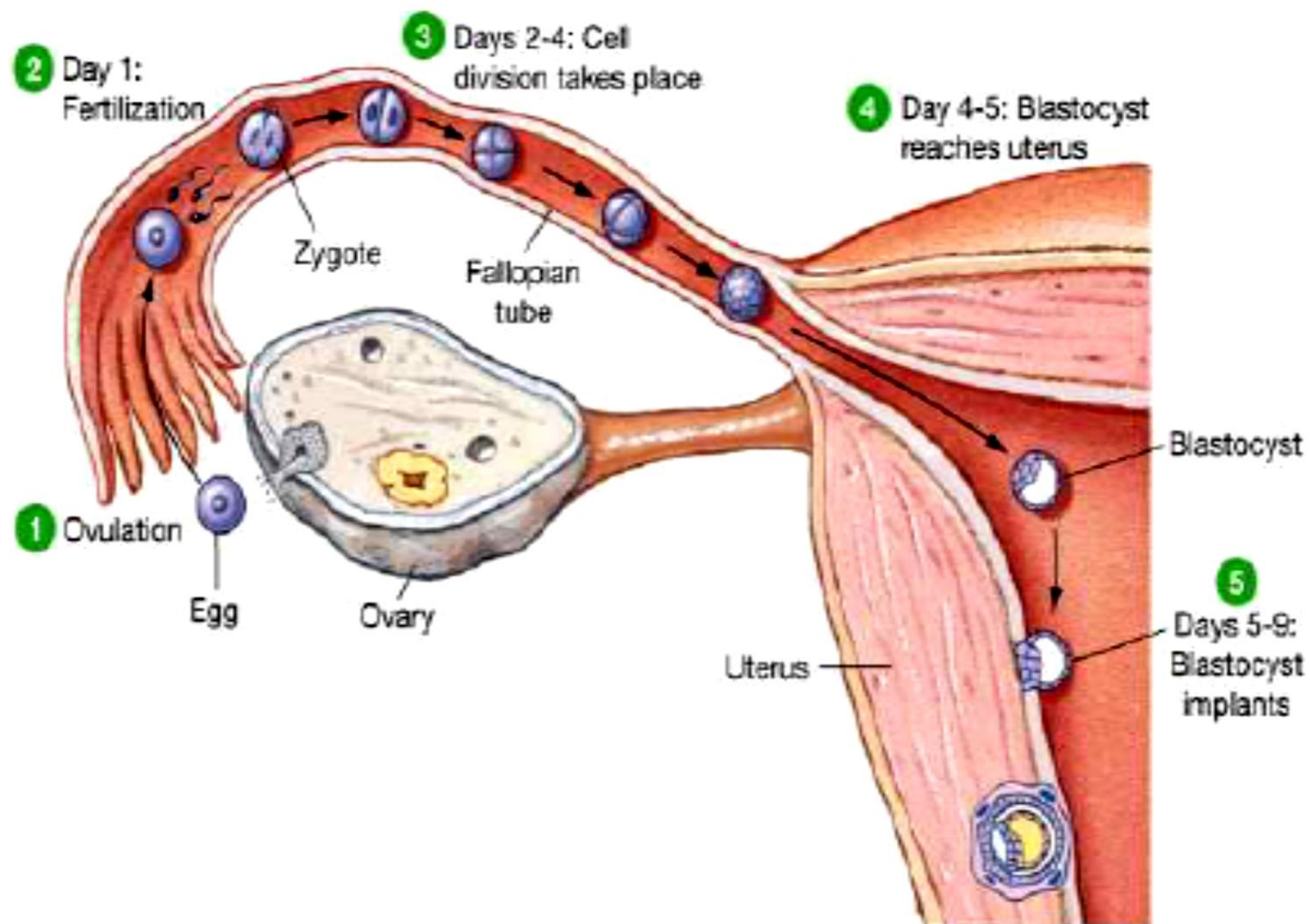
10^2 sptz

10^8 sptz/ml

Sperm

Concentration

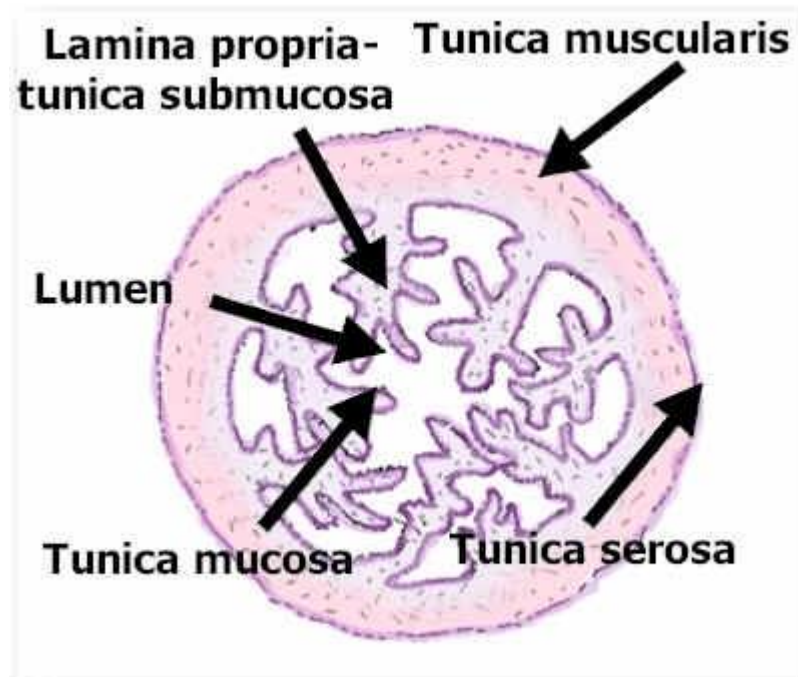
Gradient



UTERINE TUBES: MICROSCOPIC STRUCTURE

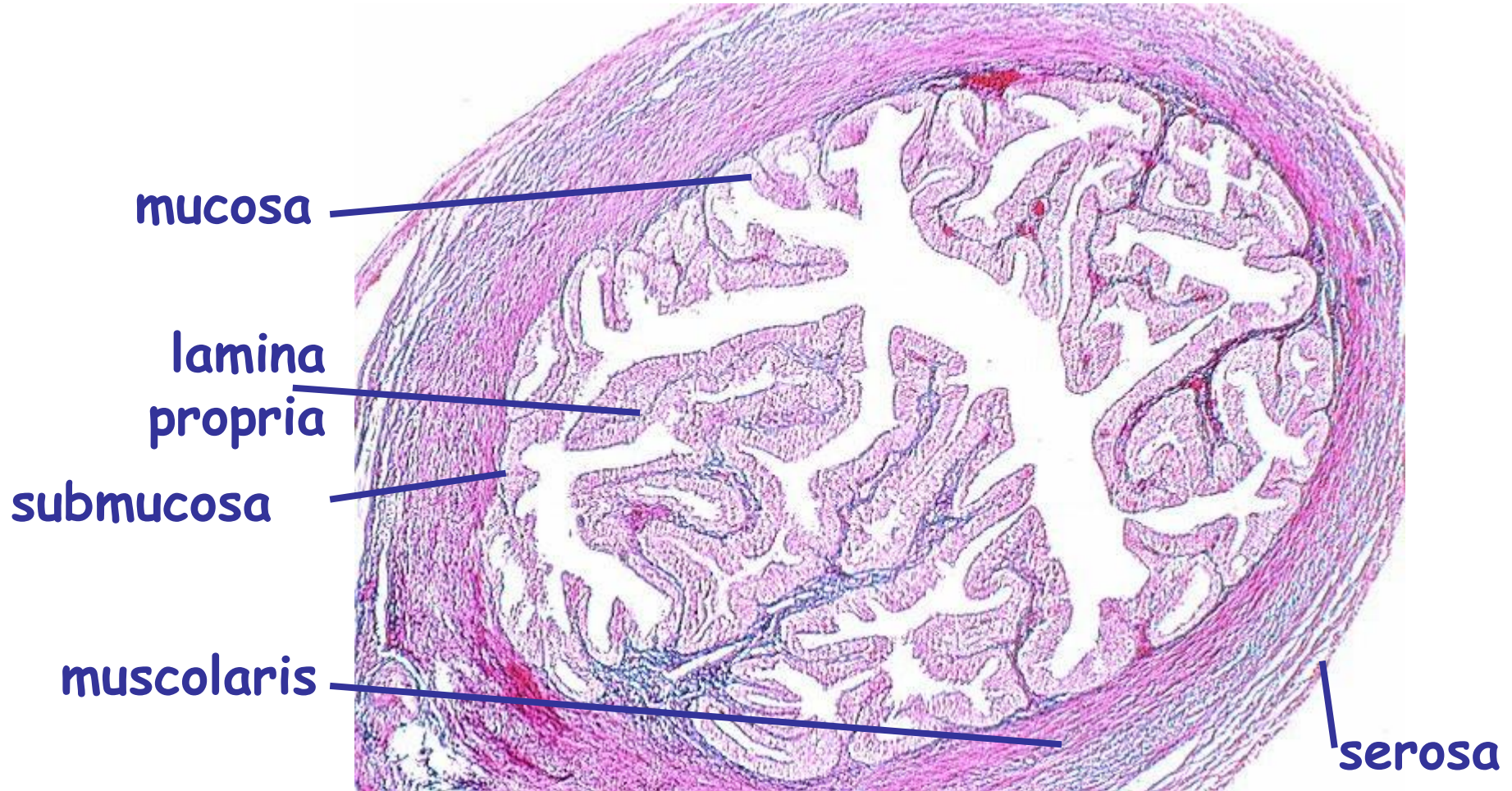
The uterine tubes are paired tubular organs with the typical organization of a tubular organ, i.e., four tunics consisting of:

1. tunica mucosa
2. tunica submucosa-
lamina propria
3. tunica muscularis
4. tunica serosa.



The thickness and specific characteristics of these tunics varies with the region of the uterine tube.

UTERINE TUBES: MICROSCOPIC STRUCTURE

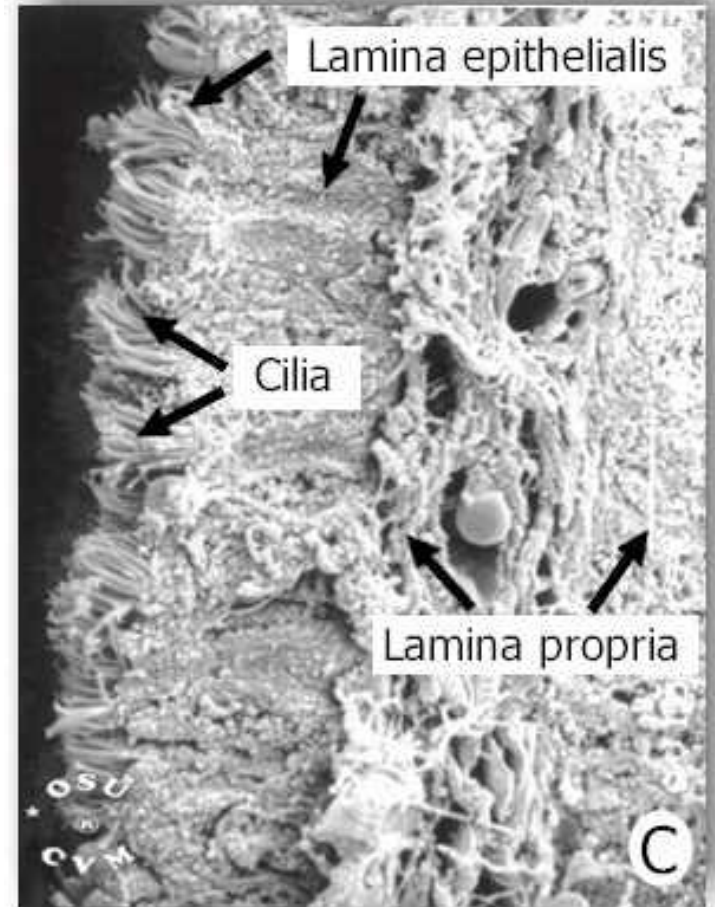


TUNICA MUCOSA

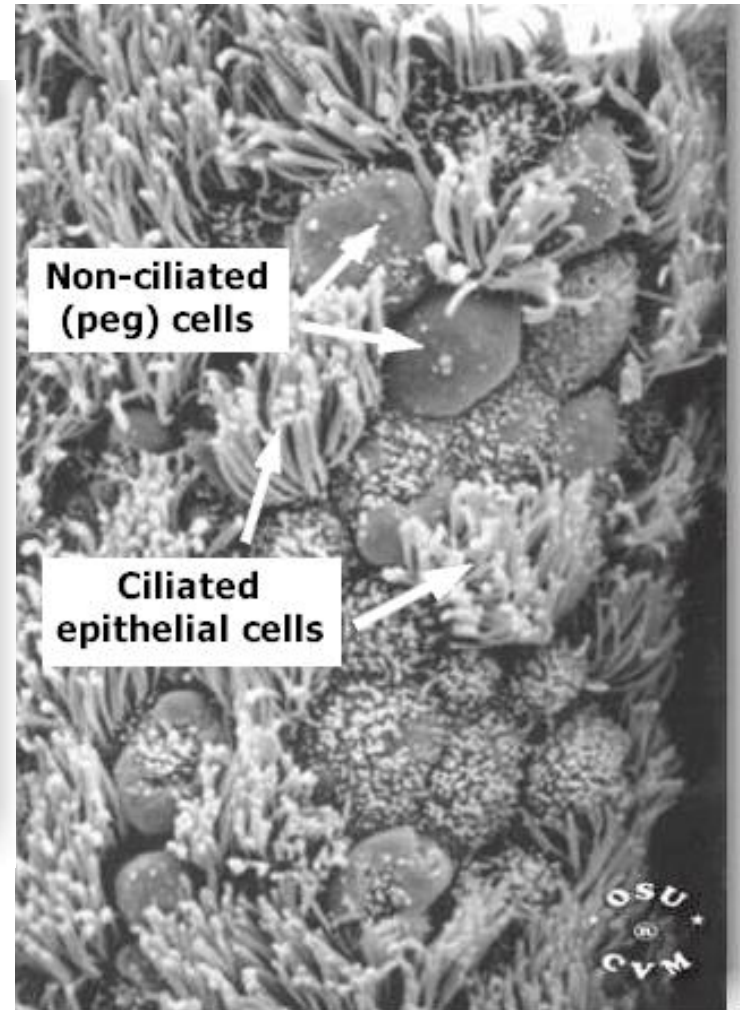
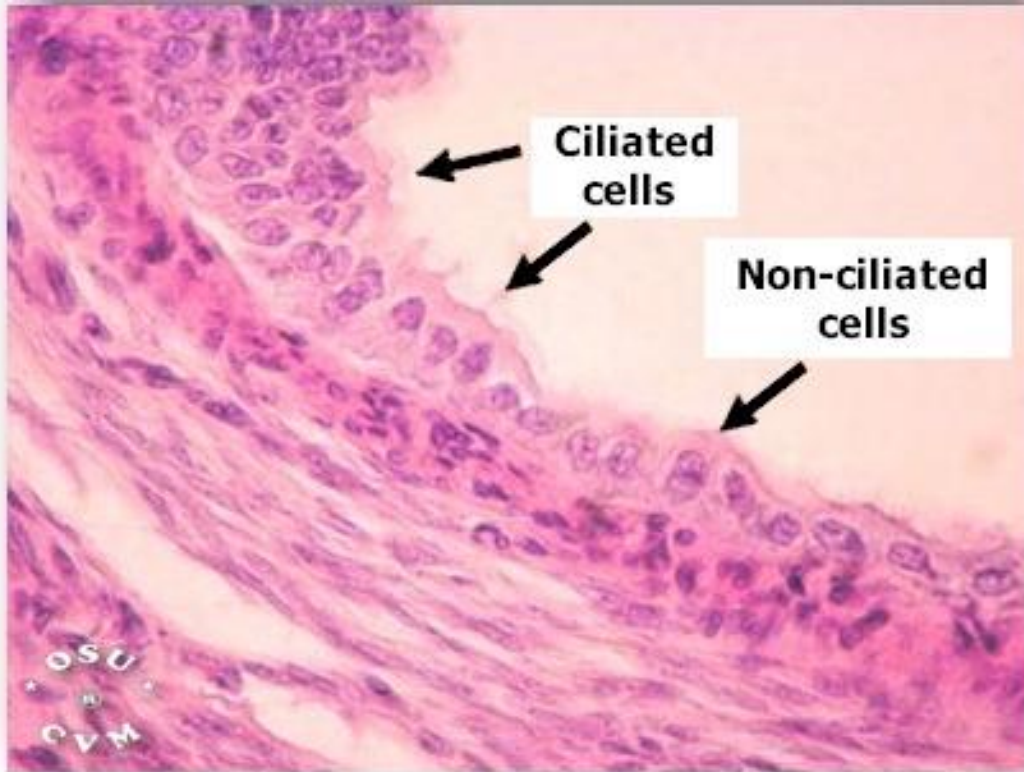
The epithelium of the tunica mucosa is **simple columnar** and contains two types of cells:

(1) ciliated; ciliary beating causes caudal fluid flow, to move the oocyte toward the uterus;

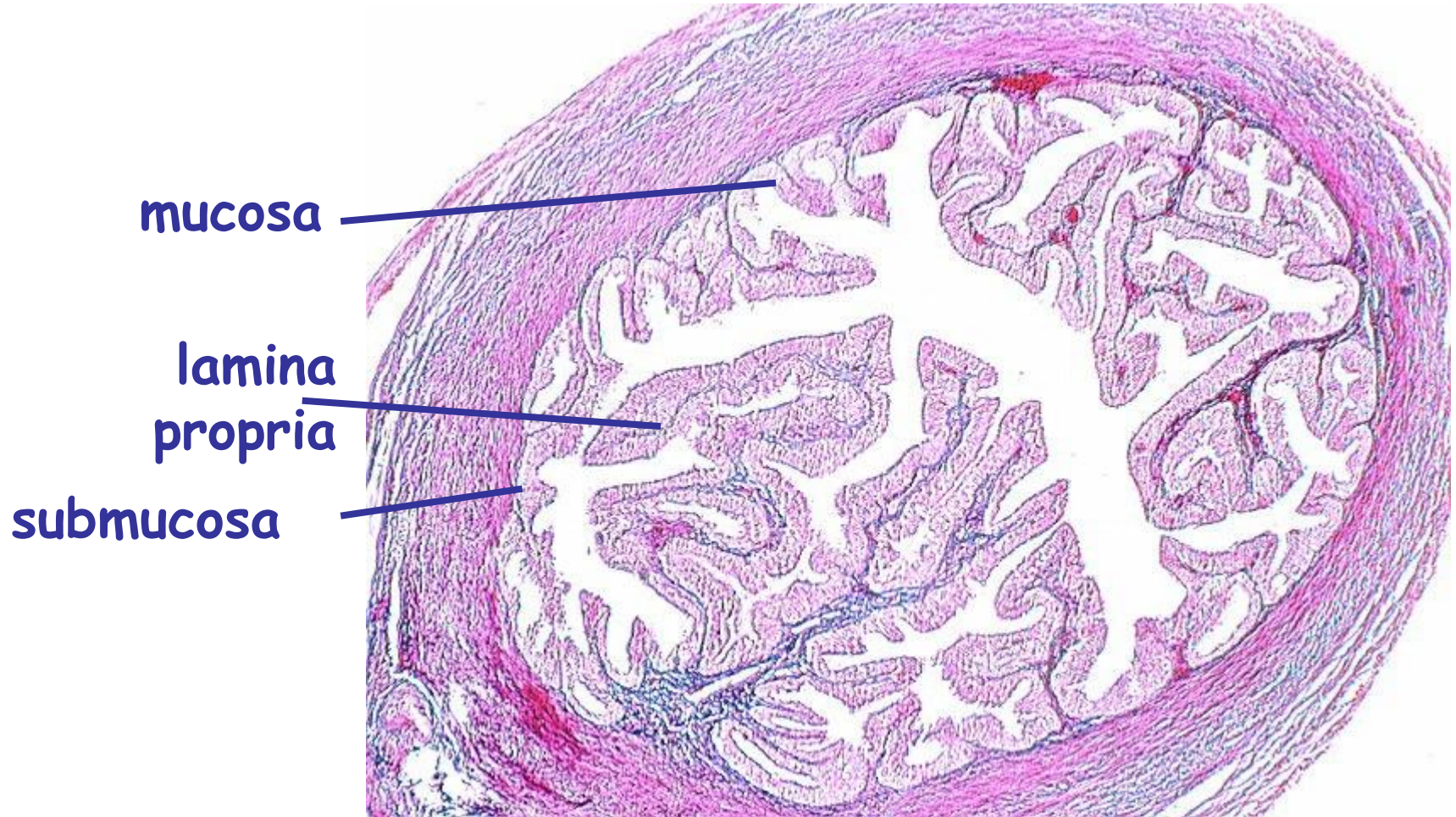
(2) non-ciliated secretory cells



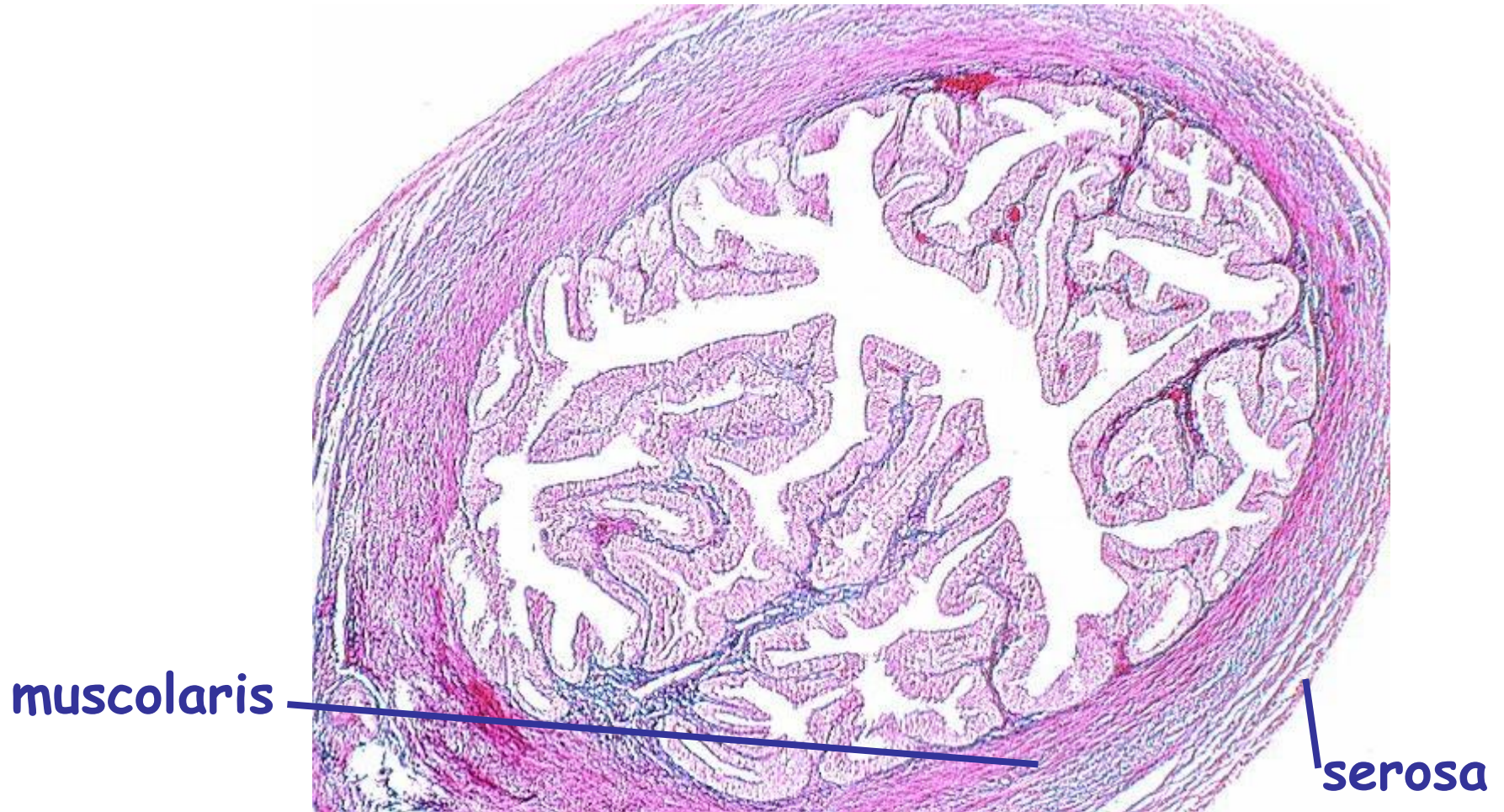
TUNICA MUCOSA

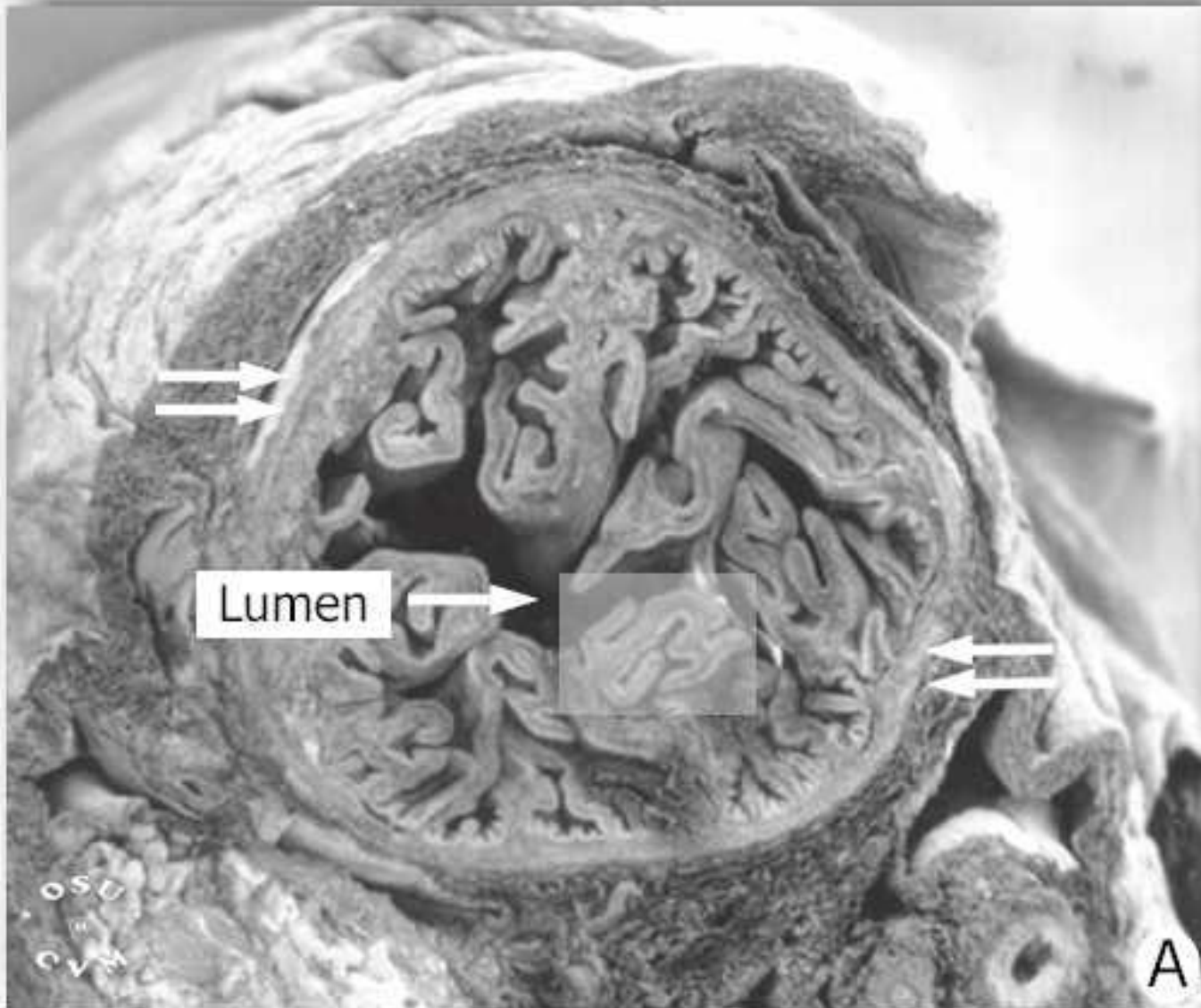


TUNICA SUBMUCOSA-LAMINA PROPRIA



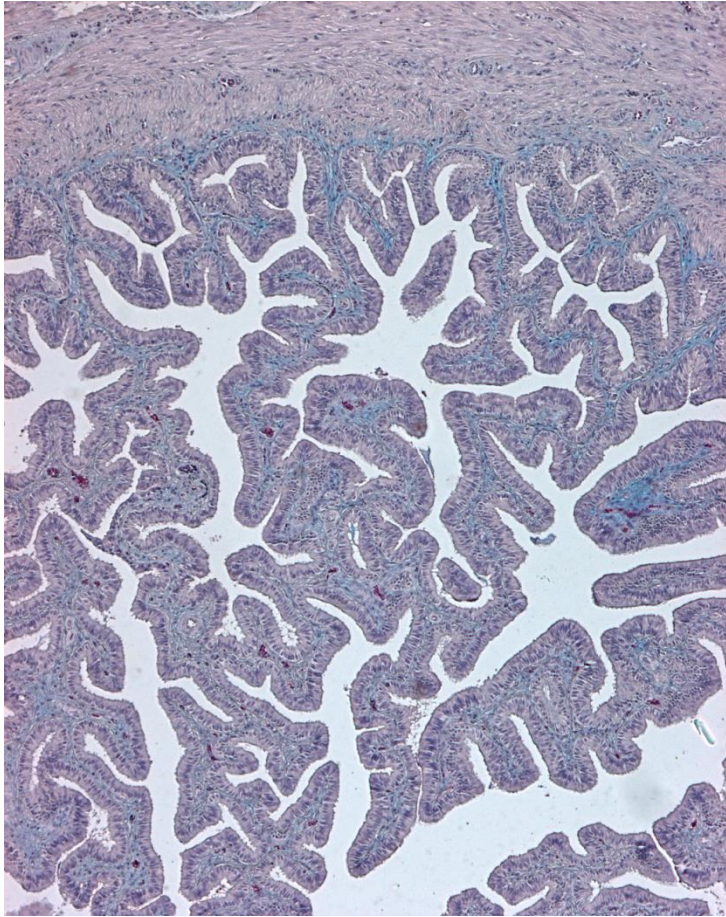
TUNICA MUSCULARIS AND SEROSA



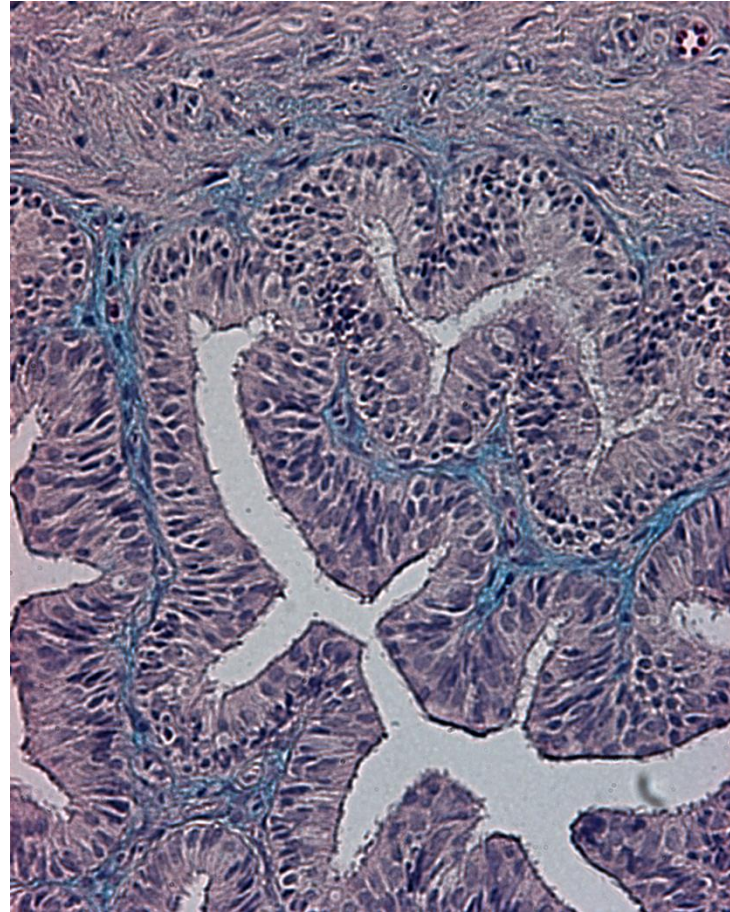


The **tunica mucosa** is highly branched and folded, especially in **the infundibulum and ampulla.**

INFUNDIBULUM/AMPULLA



5 X

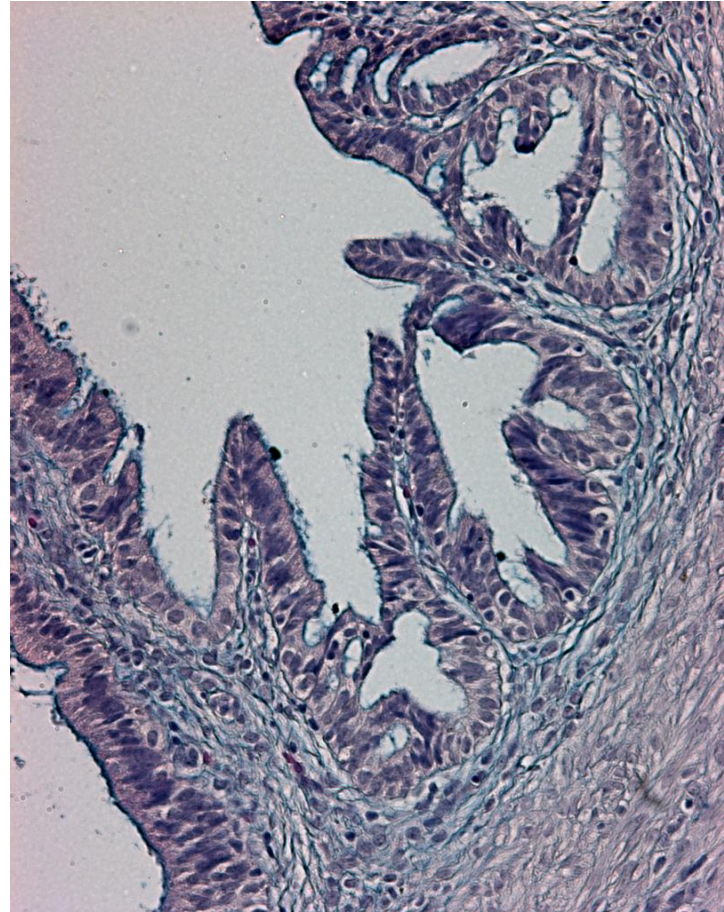


20 X

ISTHMUS

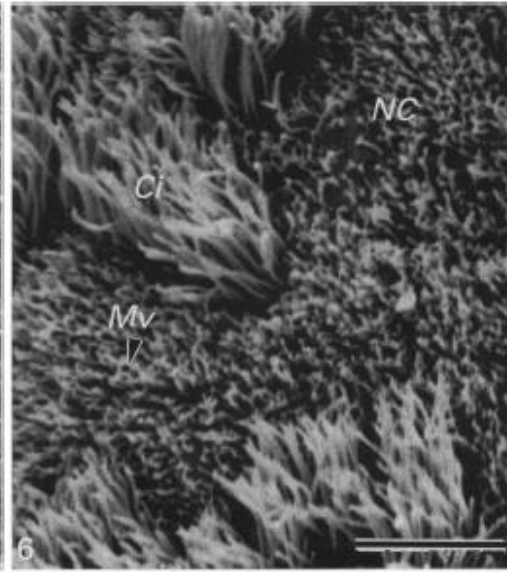
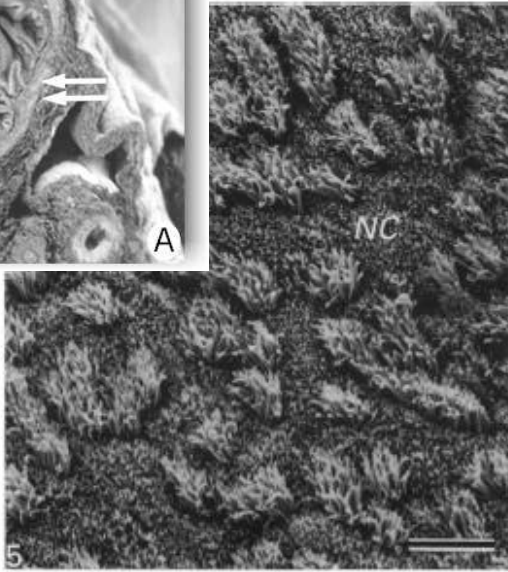
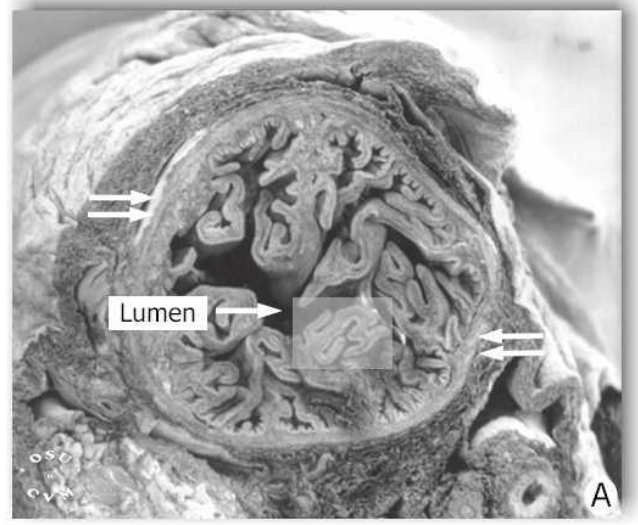


5 X

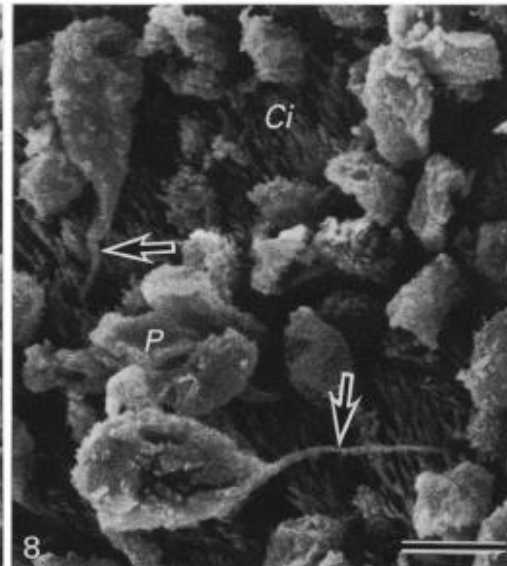
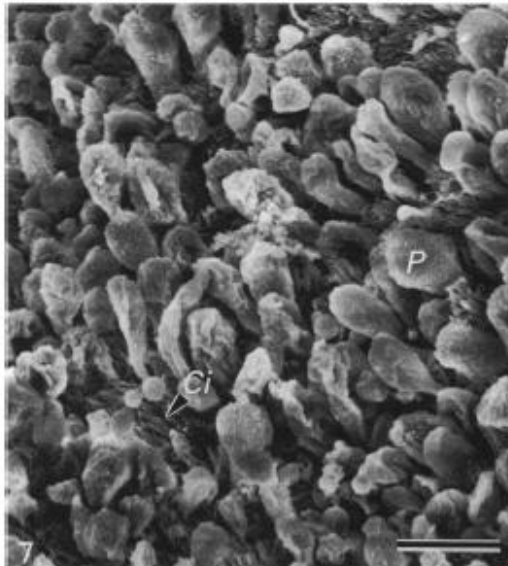


20 X

Cyclic Changes in the Epithelium

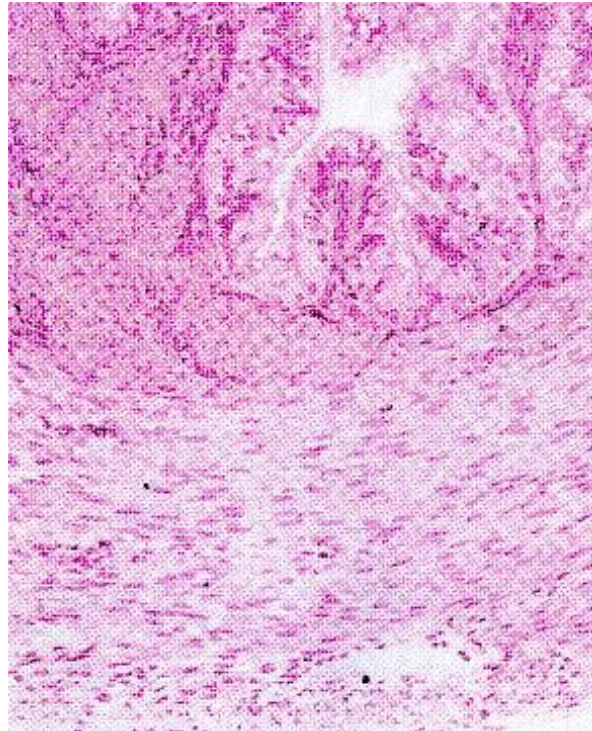


FOLLICULAR
PHASE



LUTEAL
PHASE

Cyclic Changes in the Muscularis



In the isthmus the peristaltic contractions undergo cyclic changes.

In the follicular phase antiperistaltic contractions causes a cranial fluid flow towards the ampulla.

In the luteal phase, strong contractions causes caudal fluid flow, to move the embryo toward the uterus.