

Ministry of Education and Science of the Kyrgyz Republic

Osh State University



Federal State-Funded Educational Institution of Higher Education  
"Voronezh State Medical University named after N.N. Burdenko"  
of the Ministry of Health of the Russian Federation



Department of Anatomy, Histology and Normal Physiology  
Department of Histology

## **TRAINING MANUALS – ALBUM**

in Human Histology 2

for practical classes, independent self work and self-preparation for  
the specialty "560001-General Medicine"

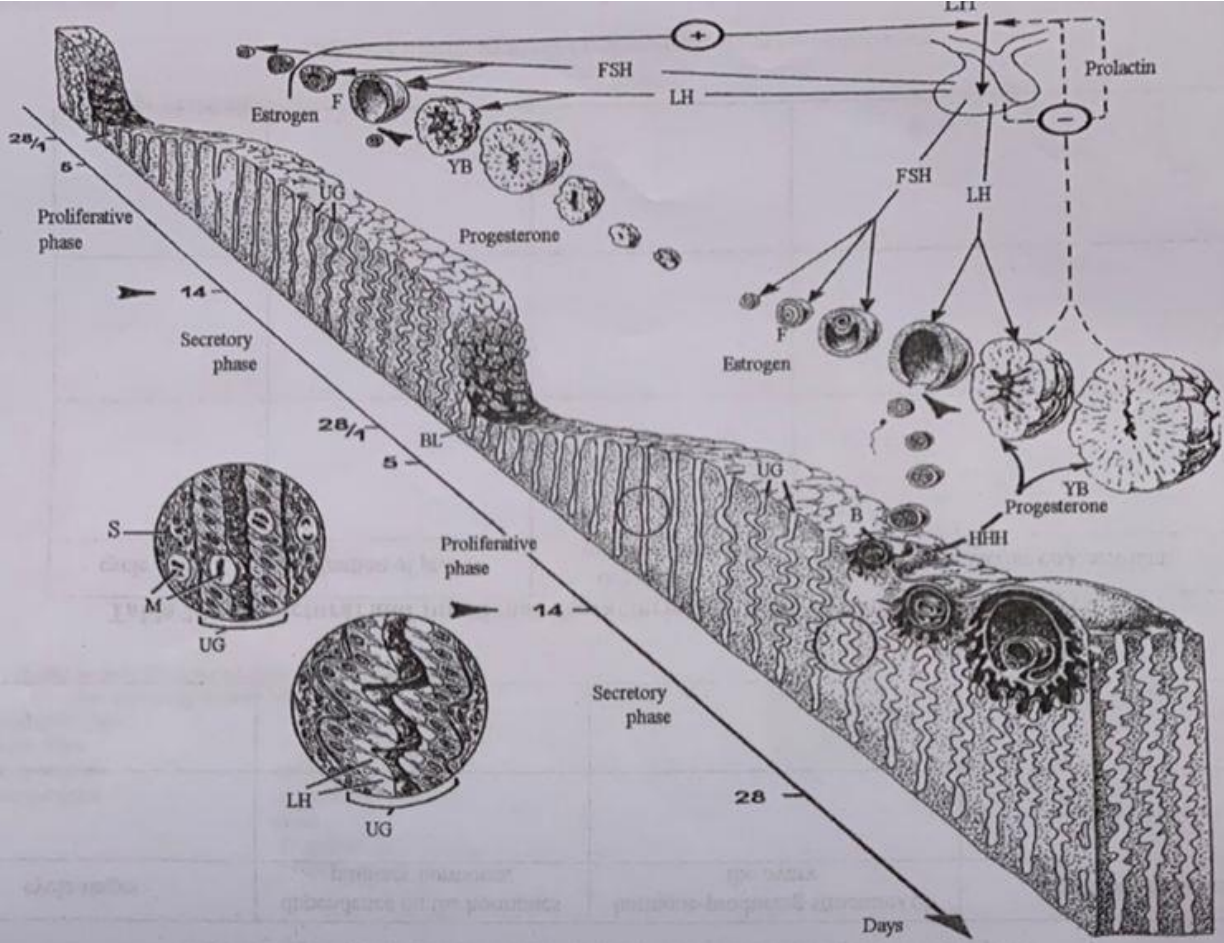
Voronezh-Osh, 2023

## 9. Students individual work (SIW)

№ and name of the topic	competencies	Task for self-work	Hours	Form of control	Points	Lit-re	week
1	2	3	4	5	6	7	8

### Module №1

Introduction The subject and objectives of the course of histology with cytology. The history of the development of histology as a science. Methods of histological examination.	GC-1 SIC-1 PC-5 PC-1 5 PC-3 2	1. The history of the discovery of the microscope. 2. Methods of histological techniques	1	Abstract, schematics. picture	5	1, 2, 3, 4, 5, 6	1-2
Cytology. Cell membrane. Cytoplasm and its components		1. Cytology. Cell theory. 2. Draw Membranous and nonmembranous organelles. 3. Draw Organelles of special assignment and inclusions. 4. Draw glycogen in hepatic cells	1	Abstract, schematics. picture	5	1, 2, 3, 4, 5, 6	2-3
Cell nucleus. Chromosomes. Cell cycle. Cell division (mitosis, meiosis, etc.).		1. Draw and fill in the nucleus of the cell. 2. Draw and describe mitotic cycle phases. 3. Draw and describe comparative characteristics of mitosis and meiosis.	2	Abstract, schematics. Working with microscope	5	1, 2, 3, 4, 5, 6	3-4
Introduction The subject and objectives of the course of human embryology. Fundamentals of General Embryology. Progenesis. Development and structure of germ cells. Fertilization	GC-1 SIC-1 PC-5 PC-1 5 PC-3 2	1. Draw schematic drawings of human embryonic development 2. Fill the table of germinal layers and their derivatives	2	Abstract, schematics. Working with microscope	5	1, 2, 3, 4, 5, 6	4-5



Date:

**FEMALE REPRODUCTIVE SYSTEM**

Ovarian-uterine cycle		
<b>PITUITARY HORMONES</b>		
<b>OVARY</b>		
<b>OVARIAN HORMONES</b>		
phases		
days		
<b>UTERUS</b>		
phases		
days		

## Ovary

Identify the cortical structures in the table

### "Ovarian-uterine cycle."

1. Primordial follicles.
2. Primary follicle.
3. Secondary follicle.
4. Vesicular follicle.
5. Mature follicle.
6. Ovocyte of the first order.
7. Zona pellucid.
8. Corona radiate.
9. Ovipositor tubercle.
10. Granular layer.
11. Inner teca.
12. Outer theca.
13. The corpus luteum.
14. Luteal cells.
15. The whitish body.
16. Connective tissue scar.
17. Interstitial cells.

## Uterus

Ovarian-Uterine Cycle, label the fragments of the uterine mucosa in the different phases of the cycle.

I. Desquamation phase.

Endometrium: 1. The proper lamina.  
2. Bottom sections of simple tubular glands.

II. Phase of proliferation.

Endometrium: 3. Simple prismatic epithelium. 4. Lamina propria 5. Simple tubular glands.

I. III. Phase of secretion.

Endometrium: 6. Simple prismatic epithelium. 7. Lamina propria. 8. Simple tubular glands of sawtooth shape. 9. Secretion of the uterine glands.

### Directions for work with micropreparation:

Ovary. Under low magnification, examine and locate the ovary as a white sheath covered with superficial simple cuboidal layer cubic epithelium. Identify all the ovarian structures below.



### Ovary (hematoxylin-eosin staining)

1. Cortex.
2. Medulla.
3. Surface epithelium.
4. Tunica albugenia.
5. Primordial follicles.
6. Primary follicle.
7. Secondary follicle.
8. Vesicular follicle.
9. Mature follicle.
10. Ovocyte of the first order.
11. The glistening sheath.
12. Corona radiate.
13. Ovipositor tubercle.
14. Granular layer.
15. Inner teca.
16. External theca.
17. Yellow body.
18. Luteal cells.
19. Whitish body.
20. Atretic body.
21. Interstitial cells.
22. Vessels of the medulla.
23. Hyalus portal cells.