Academic Year 2019/2020   Faculty of Medicine

Microscopic Anatomy and Embryology I.

Those students whose average score of the midterm tests is at least 4, will be exempted from the practical (oral) part of the semifinal exam (4, 4=4; 3, 5=4; 4, 5=5; 5, 5=5) and should pass only the theoretical (electronic) test.

NOTE: ONLY THE FIRST TRIES on the 6\textsuperscript{TH} and 13\textsuperscript{TH} weeks ARE COUNTED, THE RETAKES NOT. The midterm tests are obligatory. Without a valid grade (1-5) for them the semester is not accepted.

EM I. 1-6, 13, 14, 16

<table>
<thead>
<tr>
<th>Week</th>
<th>Lectures</th>
<th>Histology laboratory</th>
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<tbody>
<tr>
<td></td>
<td><strong>Thursdays  8.00 - 9.40</strong></td>
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<tr>
<td>Week 1</td>
<td>02. 3-7. 1. Epithelial tissues, cell contacts, intercellular connections (Prof. Szél) 2. Glandular epithelium (Prof. Kiss)</td>
<td>Introduction to histology (preparation of slides, stainings, use of the CaseViewer software)</td>
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<tr>
<td>Week 2</td>
<td>02.10-14. 3. Connective tissue cells and fibres. Extracellular matrix (Dr. Dóra) 4. Blood. Corpuscular elements. Red bone marrow, erythropoiesis, Formation of leukocytes (Dr. Dóra)</td>
<td>Simple and stratified epithelial tissues</td>
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<td>Week 3</td>
<td>02.17-21. 5. Supporting tissues (cartilage, bone) (Dr. Kocsis) 6. Ossification, bone remodeling (Dr. Dóra)</td>
<td>Connective tissues Cells and fibrous elements Blood and red bone marrow</td>
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<td>Week 4</td>
<td>02.24-28. 7. Muscle tissues (Dr. H.-Minkó) 8. Histology of vessels (Dr. Nagy)</td>
<td>Supporting tissues Cartilage, bone; Types of ossification</td>
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<td>Week 5</td>
<td>03.2-6. 9. Histology of the tongue and teeth (Dr. Kocsis) 10. Histology of the airways (Dr. Nagy)</td>
<td>Smooth, skeletal and cardiac muscle types Blood vessels</td>
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<td>Week 6</td>
<td>03.9-13. 11. Gametes, fertilization, cleavage, blastulation (Dr. H.-Minkó) 12. Implantation. Placenta, placental circulation, fetal membranes (Dr. Nagy)</td>
<td>Midterm test 1 Histology of ground tissues Gastrointestinal tract: Lip, tongue, lingual papillae. Tooth bud, salivary glands</td>
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</table>
| Week 7 03.16-20. | 13. Histology of the esophagus and stomach (Prof. Wenger)  
14. Microscopical anatomy of the small and large intestines (Dr. Nagy) | **Respiratory system**: Larynx, trachea, lung |
|----------------|----------------------------------------------------------------|----------------------------------|
| Week 8 03.23-27. | 15. Molecular basis for gastrulation. Formation, differentiation and derivatives of the germinal layers (Prof. Szél)  
16. Neurulation, folding of the embryo. Body axes, left-right lateralization, asymmetry (Prof. Szél) | **Gastrointestinal tract**: Esophagus, stomach, Duodenum, jejunum, ileum, colon |
| Week 9 03.30-04.3 | 17. Histology of the liver and pancreas (Dr. Csáki)  
18. Pharyngeal arches, development of the foregut (Dr. Csáki) | **Gastrointestinal tract**: Liver, gall bladder, pancreas |
| **04.6-04.10.** | **EASTER BREAK – SPRING HOLIDAYS** | |
| Week 10 04.13-17. | 19. Development of the face, malformations (Dr. Nagy)  
20. Development of the midgut and hindgut (Prof. Szél) | **Urinary system**: Kidney, ureter, urinary bladder |
| Week 11 04.20-24. | **NO LECTURES – FACULTY DAY**  
21. -  
22. - | **Male genital system**: Testis, epididymis, spermatic cord. Seminal vesicle, prostate, penis, glans penis |
| Week 12 04.27-05.01 | 23. Microscopical anatomy of urinary organs (Dr. Katz)  
24. Development of the urinary system. Development of the genital system (Dr. Katz) | **NO HISTOLOGY CLASS ON FRIDAY (May 1)** |
| Week 13 05.04-08. | 25. Development of the peritoneum (peritoneal relations) (Prof. Szél)  
26. Development of the heart (Dr. Nagy) | **Midterm test 2**  
Histology of respiratory, cardiovascular, gastrointestinal, urinary and male genital systems  
**Female genital system**: Ovary, corpus luteum, uterine tube |
| Week 14 05.11-15. | 27. Development of arteries and veins (Dr. Nagy)  
28. Development of the respiratory system. Fetal circulation (Dr. H.-Minkó) | **Female genital system**: Uterus (proliferation, secretion), vagina, placenta |
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2. Glandular epithelium (Prof. Kiss) | **Introduction to histology**  
(preparation of slides, stainings, use of the CaseViewer software) |
| **Week 2** 02.10-14.  
(*TDK conference 12-13*) | 3. Connective tissue cells and fibres. Extracellular matrix (Dr. Dóra)  
4. Blood. Corpuscular elements. Red bone marrow, erythropoiesis, Formation of leukocytes (Dr. Dóra) | **Simple and stratified epithelial tissues** |
| **Week 3** 02.17-21. | 5. Supporting tissues (cartilage, bone) (Dr. Kocsis)  
6. Ossification, bone remodeling (Dr. Dóra) | **Connective tissues**  
Cells and fibrous elements  
Blood and red bone marrow |
| **Week 4** 02.24-28. | 7. Muscle tissues (Dr. H.-Minkó)  
8. Histology of vessels (Dr. Nagy) | **Supporting tissues**  
Cartilage, bone; Types of ossification |
| **Week 5** 03.2-6. | 9. Histology of the tongue and teeth (Dr. Kocsis)  
10. Histology of the airways (Dr. Nagy) | Smooth, skeletal and cardiac muscle types  
Blood vessels |
| **Week 6** 03.9-13. | 11. Gametes, fertilization, cleavage, blastulation (Dr. H.-Minkó)  
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**Histology of ground tissues**  
**Gastrointestinal tract**: Lip, tongue, lingual papillae.  
Tooth bud, salivary glands |
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04.13-17. | 19. Development of the face, malformations (Dr. Nagy)  
20. Development of the midgut and hindgut (Prof. Szél)  

**Urinary system**  
Kidney, ureter, urinary bladder |
| **Week 11**  
04.20-24.  
**04.23.**  
Faculty Day | 21. Microscopical anatomy of urinary organs Dr. Katz)  
22. Development of the urinary system. Development of the genital system (Dr. Katz)  

**NO HISTOLOGY CLASS FOR GRS 7-12 ON THURSDAY**  
**Male genital system**  
Testis, epididymis, spermatic cord |
| **Week 12**  
04.27-05.01  
**Friday May 1** | **NO LECTURES – MAY 1**  
23. -  
24. -  

**NO HISTOLOGY CLASS FOR GRS 15, 17 ON FRIDAY**  
**Male genital system**  
Seminal vesicle, prostate, penis, glans penis |
| **Week 13**  
05.04-08. | 25. Development of the peritoneum (peritoneal relations) (Prof. Szél)  
26. Development of the heart (Dr. Nagy)  

**Midterm test 2**  
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**Female genital system**  
Ovary, corpus luteum, uterine tube |
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