

# Microscopic Anatomy I. Faculty of Medicine 2023/ 2024 EM I

Week	Histological specimens		
<p style="text-align: center;">.Week 1</p> <p>02.12 - 02.16.</p>	<p><b>Simple epithelial tissues</b></p> <ol style="list-style-type: none"> <li>1. Simple squamous epithelium (pancreas, Toluidine blue (TB))</li> <li>2. Simple cuboidal + columnar epithelium (biliary vesicle, human, HE)</li> <li>3. Pseudostratified simple columnar epithelium - Trachea (human, HE)</li> </ol> <hr style="border-top: 1px dashed black;"/> <p><b>Simple and stratified epithelial tissues</b></p> <ol style="list-style-type: none"> <li>4.a Transitional epithelium - Urinary vesicle (monkey, HE)</li> <li>5. Stratified non-keratinizing squamous epithelium - Esophagus: upper and middle portions (human, HE)</li> <li>6. Stratified keratinizing squamous epithelium - Plantar skin (human, HE)</li> <li>7.a Stratified columnar epithelium - Penis (human, HE)</li> </ol>		
<p style="text-align: center;">Week 2</p> <p>02.19 - 23</p>	<p><b>Glandular epithelium</b></p> <ol style="list-style-type: none"> <li>3 Goblet cells (Trachea HE)</li> <li>10.a. Merocrine secretion (seromucous) - Submandibular gland (human, HE)</li> <li>11. Apocrine secretion - Axillary skin (human, HE)</li> <li>12. Holocrine secretion - Hairy skin (HE)</li> <li>10c. <i>Submandibular gland (human, Movat pentachrome)</i>Connective tissue fibres and cells. Connective tissue types.</li> </ol> <hr style="border-top: 1px dashed black;"/> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> <li>20a. Umbilical cord (newborn human, HE)</li> <li>6. Plantar skin (human, HE)</li> <li>21. Lymph node (semithin section; rat, toluidine blue)</li> <li>24. Liver (human, silver nitrate impregnation)</li> <li>25.b Aorta (resorcin-fuchsin)</li> </ol> </td> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> <li>3. <i>Trachea (human, HE)</i></li> <li>155 <i>Granulation tissue (connective tissue cells (HE)</i></li> <li>86. <i>Vagina (human, trichrome)</i></li> </ol> </td> </tr> </table>	<ol style="list-style-type: none"> <li>20a. Umbilical cord (newborn human, HE)</li> <li>6. Plantar skin (human, HE)</li> <li>21. Lymph node (semithin section; rat, toluidine blue)</li> <li>24. Liver (human, silver nitrate impregnation)</li> <li>25.b Aorta (resorcin-fuchsin)</li> </ol>	<ol style="list-style-type: none"> <li>3. <i>Trachea (human, HE)</i></li> <li>155 <i>Granulation tissue (connective tissue cells (HE)</i></li> <li>86. <i>Vagina (human, trichrome)</i></li> </ol>
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<p style="text-align: center;">Week 3</p> <p>02.26- 03.01.</p>	<p><b>Types of connective tissue</b></p> <ol style="list-style-type: none"> <li>20a Umbilical cord (newborn human, HE)</li> <li>6. Plantar skin (human, HE)</li> <li>26. Tendon (human, HE)</li> <li>10.a. Submandibular gland (human, HE)</li> <li>27 Uterus (human, HE)</li> <li>28. Blood smear (May-Grünwald-Giemsa = MGG)</li> </ol> <hr style="border-top: 1px dashed black;"/> <p><b>Supporting tissues (cartilage, bone)</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> <li>30. Hyaline cartilage (human costal cartilage, HE)</li> <li>32. Auricule (human, Verhoeff's stain)</li> <li>33. Meniscus (human, HE)</li> <li>34. Cross section of a long bone (human ulna, unstained)</li> </ol> </td> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> <li>35. Compact bone (cross section, Schmorl's picrothionin stain)</li> <li>36. Compact bone (longitudinal section, Schmorl's stain)</li> <li>37. Trabecular bone, bone marrow, (body of vertebra+intervertebral disc, human, HE)</li> <li>31. <i>Hyaline cartilage (lung , human, semithin section, toluidine blue)</i></li> </ol> </td> </tr> </table>	<ol style="list-style-type: none"> <li>30. Hyaline cartilage (human costal cartilage, HE)</li> <li>32. Auricule (human, Verhoeff's stain)</li> <li>33. Meniscus (human, HE)</li> <li>34. Cross section of a long bone (human ulna, unstained)</li> </ol>	<ol style="list-style-type: none"> <li>35. Compact bone (cross section, Schmorl's picrothionin stain)</li> <li>36. Compact bone (longitudinal section, Schmorl's stain)</li> <li>37. Trabecular bone, bone marrow, (body of vertebra+intervertebral disc, human, HE)</li> <li>31. <i>Hyaline cartilage (lung , human, semithin section, toluidine blue)</i></li> </ol>
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<p style="text-align: center;">Week 4</p> <p>03.04 -03.08.</p>	<p><b>Types of ossification, bone restructuring</b></p> <ol style="list-style-type: none"> <li>38.b Intramembranous ossification (calvary, human, AZAN)</li> <li>39. Endochondral ossification (Week 17 human fetus, longitudinal section of developing foot, HE)</li> </ol> <hr style="border-top: 1px dashed black;"/> <p><b>Nerve tissue</b></p> <ol style="list-style-type: none"> <li>40. Peripheral nerve (sciatic nerve, longitudinal and cross sections, human, HE)</li> <li>41. Multipolar nerve cell (celiac ganglion, human, Bielschowsky's impregnation)</li> </ol>		
<p style="text-align: center;">. Week 5</p> <p>03.11 -03.15.</p>	<p><b>Smooth, skeletal and cardiac muscle types</b></p> <ol style="list-style-type: none"> <li>50. Skeletal muscle (iron hematoxylin)</li> <li>5. Smooth muscle and visceral striated muscle (esophagus: upper and middle portions, human, HE)</li> <li>51. Cardiac muscle (human, HE)</li> <li>52. <i>Eberth's line, heart, atrioventricular node (human, trichrome)</i></li> </ol> <hr style="border-top: 1px dashed black;"/> <p><b>MIDTERM 1. Basic tissues</b></p> <p><b>Histology of blood vessels</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> <li>25a. Large artery of elastic type (aorta, human, HE)</li> <li>60. Medium size artery and vein (femoral vessels, Movat)</li> <li>61. Small arteries, arterioles and small veins, venules (tongue, human, HE)</li> <li>1. Capillaries ( pancreas, semithin section, rat, toluidine blue)</li> <li>63. <i>Pericyte (skin of human abdominal wall, <math>\alpha</math>-smooth muscle actin (SMA) immunocytochemistry)</i></li> <li>64. <i>Arteriovenous anastomosis /glomus organ (fingertip, human hand, HE)</i></li> </ol> </td> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> <li>25b. <i>Elastic artery (aorta, resorcin fuchsin)</i></li> </ol> </td> </tr> </table>	<ol style="list-style-type: none"> <li>25a. Large artery of elastic type (aorta, human, HE)</li> <li>60. Medium size artery and vein (femoral vessels, Movat)</li> <li>61. Small arteries, arterioles and small veins, venules (tongue, human, HE)</li> <li>1. Capillaries ( pancreas, semithin section, rat, toluidine blue)</li> <li>63. <i>Pericyte (skin of human abdominal wall, <math>\alpha</math>-smooth muscle actin (SMA) immunocytochemistry)</i></li> <li>64. <i>Arteriovenous anastomosis /glomus organ (fingertip, human hand, HE)</i></li> </ol>	<ol style="list-style-type: none"> <li>25b. <i>Elastic artery (aorta, resorcin fuchsin)</i></li> </ol>
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<p><b>Week 6</b> 03.18 -03.22.</p>	<p><b>Lymphatic organs</b>  100a Thymus (HE) <span style="float: right;">100b Thymus (pancytokeratin ICC),</span>  101. Palatine tonsil (HE) <span style="float: right;">103. Pharyngeal tonsil (HE)</span>  102. Lingual tonsil (HE) <span style="float: right;">102 a,b Palatine tonsil (T/B cell ICC)</span></p> <hr/> <p><b>Lymphatic organs</b>  21. Lymph node (rat, TB) <span style="float: right;">106a,b Spleen (human T/B cell ICC)</span>  105. Spleen (human , HE)</p>
<p><b>Week 7</b> 03.25 -03.29 <i>Friday is holiday</i></p>	<p><b>Gastrointestinal tract</b>  110. Lip (Krutsay trichrome)  61. Tongue: <i>filiform and fungiform papillae</i> (HE)  111. Tongue; foliate papillae (human + monkey or rabbit, HE)  112. Tongue: <i>circumvallate papillae</i> (HE)</p> <hr/> <p>120.a, b Ground tooth (unstained) <span style="float: right;">10c. Submandibular gland (Movat pentachrom)</span>  121. Developing tooth (AZAN) <span style="float: right;">51. Parotid gland (HE)</span>  122. Sublingual g+ submandibular glands (HE) <span style="float: right;">10a. Submandibular gland (human, HE)</span></p>
<p><b>Week 8</b> 04.02 - 05. <i>Monday is holiday</i></p>	<p>5. Esophagus: upper and middle portions (human, HE)  130a. Stomach, fundus (HE) <span style="float: right;">132.a Duodenum (HE)</span> <span style="float: right;">132.b Duodenum (human PAS +H)</span>  131. Gastro-esophageal junction - cardia (HE) <span style="float: right;">132c Duodenum (human, alcian blue H picrosirius red)</span>  134. Pylorus (gastroduodenal junction, HE) <span style="float: right;">133 Duodenum (cat, HE)</span></p> <hr/> <p>135a Jejunum (HE) <span style="float: right;">136a Ileum (human, HE)</span>  136a Ileum (Peyer's patches, human, HE) <span style="float: right;">138a. Vermiform appendix (human, HE)</span>  137. Colon (human, HE) <span style="float: right;">138.b Vermiform appendix (aged, human, HE)</span></p>
<p><b>Week 9</b> 04.08 - 04.12</p>	<p>140.a,b Liver (human, HE) <span style="float: right;">24. Liver (human, silver impregnation)</span>  141 Liver (human, trichrome) <span style="float: right;">140.c Liver (human, SMA ICC/H)</span>  2. Biliary vesicle: fundus &amp; neck (human, HE) <span style="float: right;">70. Pancreas (HE)</span></p>
<p><b>Week 10</b> 04.15- 04.19</p>	<p><b>Respiratory system</b>  150. Epiglottis (HE) <span style="float: right;">151. Larynx (HE)</span></p> <hr/> <p>3. Trachea (HE) <span style="float: right;">153. Lung (toluidine blue)</span>  152. Lung (HE) <span style="float: right;">154. Fetal lung (human, HE)</span></p>
<p><b>Week 11</b> 04.22 -04.26.</p>	<p><b>Urinary system</b>  160. Kidney (HE)  161. Kidney (semithin, toluidine blue)  162. Ureter (HE)  4.a,b Urinary vesicle (monkey, HE)</p> <hr/> <p><b>MIDTERM 2. Histology of internal organs (except for the genital organs)</b></p>
<p><b>Week 12</b> 04.29 - 05.03..</p>	<p><b>Male genital system</b>  170.a, b Testicle (human,HE) <span style="float: right;">172. Spermatic cord (human, trichrome)</span>  171.c Epididymis (human, HE)</p> <hr/> <p>173. Prostate (aged, human, HE) <span style="float: right;">174.a,b Seminal vesicle (HE )</span>  7.a Penis (human, HE) <span style="float: right;">7.b Penis (human, Verhoeff's elastic stain)</span> <span style="float: right;">7.c Glans penis (HE)</span></p>
<p><b>Week 13</b> 05.06 - 10.</p>	<p><b>Female genital tract</b>  180. Ovary (rabbit, HE) <span style="float: right;">182. Fallopian tube, isthmus and ampulla (human, HE)</span>  181.a, b Corpus luteum (human, HE)</p> <hr/> <p>27. Uterus, proliferation's phase (human, HE) <span style="float: right;">183. Uterus, secretory phase (human, HE)</span>  23a. Vagina (human, trichrome) <span style="float: right;">23b. Vagina (human, HE)</span></p>
<p><b>Week 14</b> 05.13 - 17.</p>	<p>20a. Umbilical cord of a newborn (human, HE) <span style="float: right;">184. Mamma non-lactans (HE)</span>  186a. Placenta (mature (delivered), human, HE) <span style="float: right;">185. Mamma Lactans (HE)</span>  186b. Placenta (mature, human, pan-cytokeratin ICC) <span style="float: right;">186c. Placenta (6th week of pregnancy, human, HE)</span>  187a Clitoris (glans, human, HE) <span style="float: right;">187b Clitoris (body, HE)</span> <span style="float: right;">188. Clitoris (glans, Neurofibril staining)</span></p> <hr/> <p><b>REVISION</b></p>