

Academic Year 2021/2022

Faculty of Medicine

EM II. Microscopic Anatomy and Embryology II.

Weeks	Lectures (Mondays 14.00-15.40 EM 1-10 Lenhossék, EM 11-20 Huzella)	Lecturer Lenhossék	Lecturer Huzella	Histology laboratory Tuesdays EM 1-6 12.00-13.30 and EM 7-12 14.00- 15.30 Wednesdays EM 13-17 10.00-11.30 Fridays EM 18-19 8.00-9.30
Week 1 09. 6-10.	1. Cellular components of lymphatic tissue. Thymus, tonsils, MALT 2. Structure and circulation of lymph nodes and spleen	1 Puskár 2 Puskár	1 Nagy 2 Nagy	Thymus, tonsils 43a, 43c, 47, 42a, 42b, 46, 48
Week 2 09. 13-17.	3. Microscopy of the CNS – fine structure of the spinal cord (spinal reflexes, receptors, effectors, monosynaptic/proprioceptive reflexes 4. Microscopy of the CNS – Nociceptive (withdrawal) and autonomic reflex arcs	3 Kozsurek 4 Puskár	3 Horváth 4 Vereczki	Lymph node, spleen 40, 45, 1a, 1b
Week 3 09. 20-24.	5. Microscopy of the CNS – Nerve tissue. Fine structure of the cerebral cortex 6. Microscopy of the CNS – Diencephalon, thalamic nuclei	5 Pálfi 6 Vereczki	5 Tóth Zs 6 Horváth	Histology of the peripheral nervous system 88, 67, 53, 79, 75, 6, 151b, 33b
Week 4 09.27 - 10. 1.	7. Microscopy of the CNS – Sensory systems, epicritical and protopathic sensibilities 8. Microscopy of the CNS – Motor systems, pyramidal tract	7 Ádám 8 Hanics	7 Csáki 8 Katz	Histology of the central nervous system 101, 22, 111, 80, 96, 16, 20
Week 5 10. 4-8.	9. Microscopy of the CNS – Brainstem nuclei and pathways. Brainstem monoaminergic systems 10. Microscopy of the CNS – Structure and connections of the basal ganglia.	9 Kálmán 10 Ádám	9 Dóra 10 Horváth	Midterm test 1 (Histology slides of weeks 1-4) Microscopy of the CNS – consultation 1.
Week 6 10. 11-15.	11. Microscopy of the CNS – Microscopy of the cerebellum, pathways 12. Microscopy of the CNS – Limbic system	11 Dobolyi 12 Kocsis	11 Ádám 12 Dobolyi	Microscopy of the CNS – consultation 2.
Week 7 10. 18-22.	13. Microscopy of the CNS – Hypothalamus, the hypothalamo-hypophysial system 14. Microscopy of the CNS – Endocrine organs (pineal, thyroid, parathyroids, adrenal glands)	13 Tóth Zs 14 Barna	13 Minkó 14 Katz	Microscopy of the CNS – consultation 3. No classes on Friday
Week 8 10. 25-29.	15. Development of the neural tube. Cranio-caudal and dorso-ventral differentiation 16. Differentiation of the brain vesicles	15 Kálmán 16 Kálmán	15 Csáki 16 Nagy	Microscopy of the CNS – consultation 4. Development of the CNS
Week 9 11. 1-5. Nov. 1 National Holiday	17. Formation and derivatives of the neural crest and placode ectoderm 18. Development of the skull	ONLINE lectures 17 Nagy 18 Székely		Midterm test 2 Microscopy of the CNS, Development of the nervous system Endocrine system 1. Hypothalamus, pituitary gland 14, 105a
Week 10 11. 8-12.	19. Development of the vertebral column, limb development 20. Skin and appendages. Mammary gland	19 Nemeskéri 20 Kocsis	19 Nagy 20 Székely	Endocrine system 2. Thyroid, parathyroid and adrenal glands, pineal body, endocrine cells 102, 104, 32, 70, 44, 97
Week 11 11.15-19.	21. Fibrous and vascular coats of the eyeball. Lens, chambers of the eye, vitreous body, accommodation 22. Inner coat of the eyeball, retina	21 Tóth Zs 22 Kozsurek	21 Szél 22 Szél	Histology of palm skin, scalp skin. Mammary gland 59, 153, 11, 107, 93 Palpebra 39
Week 12 11. 22-26	23. Optic nerve, visual pathway, visual reflexes. Development of the eye 24. External ear, middle ear - tympanic cavity, tympanic membrane, auditory ossicles	23 Ádám 24 Pálfi	23 Lendvai 24 Katz	Histology of the organ of vision: eye bulb, retina, lacrimal gland 29, 30, 113
Week 13 11.29-12.3.	25. Bony and membranous labyrinth. Vestibular system 26. Spiral organ of Corti. Auditory pathway. Development of the organ of hearing	25 Hanics 26 Nemeskéri		Histology of the organ of hearing cochlea, macula 36, 4
Week 14 12. 6-10.	27. Microscopy of the CNS – Olfactory and gustatory systems 28. Drugs of abuse, opiates and receptor mediated actions in the CNS	27 Kocsis 28 Wenger		Revision

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Weeks	<p style="text-align: center;">Histology laboratory <i>Tuesdays EM 1-6 12.00-13.30 and EM 7-12 14.00- 15.30</i> <i>Wednesdays EM 13-17 10.00-11.30 Fridays EM 18-19 8.00-9.30</i></p>
<p>Week 1 09. 6-10.</p>	<p>Lymphatic system 1 43.a Thymus (HE) 43. c Thymus 47. Palatine tonsil (HE) 42.a Palatine tonsil (CD20 immunocytochemistry) 42.b Palatine tonsil (CD3 immunocytochemistry) 46. Lingual tonsil (HE) 48. Pharyngeal tonsil (HE)</p>
<p>Week 2 09. 13-17.</p>	<p>Lymphatic system 2 Lymph node, spleen 40. Lymph node (rat, semithin, toluidine blue) 45. Spleen (human, HE) 1.a Spleen (CD20 immunocytochemistry) 1.b Spleen (CD3 immunocytochemistry)</p>
<p>Week 3 09. 20-24.</p>	<p>Histology of the peripheral nervous system 88. Peripheral nerve (sciatic nerve, HE) 67. Autonomic ganglion (celiac ganglion, Bielschowsky's impregnation) 53. Autonomic ganglion (submandibular gland, HE) 75. Motor end plate (cholinesterase enzyme histochemistry) 79. Spinal cord + dorsal root ganglion (Luxol Fast blue + cresyl violet) 6. (Vater-)Pacinian corpuscle (plantar skin, HE) 151b, 33.b</p>
<p>Week 4 09.27 - 10. 1.</p>	<p>Histology of the central nervous system 101. Spinal cord (Luxol Fast blue + cresyl violet) 111. Cortex cerebri (Bodian) 22. Cortex cerebri (pre- and postcentral gyri, Nissl) 80. Cerebellar cortex (HE) 96. Cerebellar cortex (neurofilament immunocytochemistry) 20. Hippocampus + choroidal plexus (Nissl) 16. Mesencephalon (Luxol fast blue + cresyl violet)</p>
<p>Week 5 10. 4-8.</p>	<p>Midterm test 1 (Histology slides of weeks 1-4) Microscopy of the CNS – consultation 1.</p>
<p>Week 6 10. 11-15.</p>	<p>Microscopy of the CNS – consultation 2.</p>
<p>Week 7 10. 18-22.</p>	<p>Microscopy of the CNS – consultation 3. No classes on Friday</p>
<p>Week 8 10. 25-29.</p>	<p>Microscopy of the CNS – consultation 4. Development of the CNS</p>
<p>Week 9 11. 1-5. Nov. 1 National Holiday</p>	<p>Midterm test 2 Microscopy of the CNS, development of the nervous system Endocrine system 1. 14. Hypothalamus (Chrom haematoxylin floxin/ GÖMÖRI) 105. Pituitary gland (Chrom haematoxylin floxin/GÖMÖRI)</p>
<p>Week 10 11. 8-12.</p>	<p>Endocrine system 2. 44. Pineal body (HE) 102. Thyroid gland (HE) 104. Parathyroid gland (HE) 32. Suprarenal gland (HE) 70. Endocrine pancreas/ islands of Langerhans (HE) 97. Corpus luteum (HE)</p>
<p>Week 11 11.15-19.</p>	<p>Histology of palm skin, scalp skin. Mammary gland 59. Palm skin (HE) 153. Glomus organ, nail (HE) 11. Scalp skin (HE) 107. Mamma lactans (HE) 93. Mamma non lactans (HE) Histology of the organ of vision 1 39. Eyelid (HE)</p>
<p>Week 12 11. 22-26</p>	<p>Histology of the organ of vision 2 29. Eye bulb (HE) 30. Retina (semithin, toluidine blue) 113. Lacrimal gland (HE)</p>
<p>Week 13 11.29-12.3.</p>	<p>Histology of the organ of hearing 36. Cochlea / organ of Corti (semithin, toluidine blue) 4. Macula (semithin, toluidine blue)</p>
<p>Week 14 12. 6-10.</p>	<p>Revision</p>