

Animal Histology (YEAR I, SEMESTER II)

Credit value (ECTS) 5

Course category

Field discipline (compulsory)

Course holder:

Prof. dr Carmen SOLCAN

Discipline objectives (course and practical works)

The analytical programme aims to provide students with knowledge of the morphostructure of tissues and organs in the animal organism.

The practical work aims to familiarize students with the techniques of working in a histology laboratory, staining techniques, studying tissues and organs under the microscope. Correlations are constantly made between the structure and function of the organs and systems studied.

Contents (syllabus)

Course (chapters/subchapters)
General Histology.
Tissues: epithelial, lax connective, adipose, reticular, tendinous) and metaplaque (cartilaginous and bony); blood tissue in mammals and birds
Muscle tissues: smooth, striated skeletal, striated cardiac and nodal. Central and peripheral nervous tissue
Special histology: organs and systems.
Nervous system. Histological structure of the encephalon, cerebellum, spinal cord, spinal and sympathetic ganglia and nerve fibres. Sense organs; cornea, retina, taste bud, nerve endings in the skin.
Endocrine system. Pituitary, epiphysis, adrenals, thyroid, parathyroid and pancreas endocrine glands.
Haematopoietic system. Haematogenous bone marrow, thymus, Fabricius bursa in birds, Peyer's plaque.
Vascular system; heart. Elastic type artery, muscular type artery, fibroelastic vein, arterioles, venules and capillaries.
Digestive system; prediaphragmatic (lip, teeth, tongue, salivary glands, oesophagus) and postdiaphragmatic (stomach, small intestine, large intestine, liver, exocrine pancreas and gall bladder)

Respiratory system: extra and intrapulmonary airways (trachea, inter and intralobular bronchi) and pulmonary alveoli. Lung in birds. Urinary system; kidney, ureter and bladder
Male genital system; testicles, adnexal glands (seminal glands, prostate, bulbourethral gland)
Female genital system: ovary, oviduct, uterus, cervix, vagina, mammary gland, placenta.

Practical work
Presentation of the Histology laboratory; rules of work protection; apparatus in the Histology laboratory. Obtaining permanent histological preparations..
Animal cell shapes; spherical, ellipsoidal, cylindrical, fusiform, branched.
Epithelial tissue covering and lining. . Epithelium simple pavimentos, simple cubic, prismatic with striated plate, stratified urinary type, stratified keratinized pavimentos.
Glandular epithelia: serous, mucous, mixed, sebaceous and sweat gland.
Connective tissues proper and metaplaque: lax, hemohistioblastic reticulated, cartilaginous hyaline, bony compact and spongy
Blood tissue. Smooth muscle tissue, skeletal striated, cardiac striated and nodal tissue..
Nerve tissue. Pseudounipolar, multipolar stellate, Purkinje, Betz pyramidal, nerve fibre neuron
Sense organs: skin, cornea, retina, taste bud
Endocrine system: pituitary, mammalian adrenal, thyroid, parathyroid
Haematopoietic system: thymus, lymph node, spleen. Vascular system: elastic and muscular arteries.
Prediaphragmatic digestive system: tooth, tongue, parotid gland, mandibular gland and oesophagus
Postdiaphragmatic digestive system: single-vessel stomach, duodenum, large intestine, liver and pancreas.
Urinary system: kidney, ureter. Respiratory system: trachea, lung in mammals, lung in birds
Male genital system: testis, epididymis, prostate gland.
Female genital system: ovary in mammals, uterus
Final colloquium of knowledge evaluation

References

- 1..Solcan Carmen- Histologie Veterinară. Ed. Ion Ionescu de la Brad Iași, 2018, 402 pag.
- 2.Solcan Carmen- Histologie, Ed. Performantica, Iași, 2011, 304 pag, ISBN 978-973- 730-820-7
- 3.Solcan Carmen – Histologie și embriologie, Ed. Performantica, Iași, 2006, 264 pag, ISBN 973- 730-205-2,
- 4.Solcan Carmen Histologie animală. Lucrări practice. Ed. Performantica, Iași, 2014, 164 pag

Final evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Exam Written	60%
Appreciation of the activity during the semester	Oral assessment during the semester, verification tests and final laboratory colloquium.	40%

Contact

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