# ISMS 2018

## XXVI International Symposium on Morphological Sciences

Organized by
Second Faculty of Medicine, Charles University

**July 5-7, 2018**
**Prague, Czech Republic**



# Book of Abstracts

## SIGNIFICANCE OF CXC ND 3 IN RENAL CELL UES

**ıg WQ[2], Li Y[2], Lan YH[1]**
*nd Embryology, Basic Medicine and Life edical College, Haikou, Hainan, China Basic Medical College, Jiamusi gjiang, China*

ion difference of CXC chemokine ligand ell carcinoma and its adjacent tissues, ation between CXCL3 expression and ıeters in renal clear cell carcinoma. The ınal tissue microarray was detected by ıining. The CXCL3 expression level in ;arcinoma was increased significantly lear cell carcinoma tissues (P =0.000) ; tissues adjacent to carcinomas tissues, ɛl in grade Ⅲ renal clear cell carcinoma higher as compared with grade Ⅲ (P was no relevance between CXCL3 ex- pathological parameters of renal clear pression level was positively correlated in renal clear cell carcinoma, which may e process of renal clear cell carcinoma anism.

*ɛ project of the introduction of talent re-02) from Hainan Medical University.*

## _ATINE FORAMEN: PARAMETERS AND CANCE

**i N, Ilić A, Marić D, Drvendžija Z, Perić R**
*rsity of Novi Sad, Department of*

cription of localisation of a greater pala- nportant since the intraoral anaesthesia ; opening. The **aim** of this investigation onships of the greater palatine foramen structures (median palatine suture, pos- ɛ, incisive fossa and molars).

uded 37 dry skulls (23 females and 14 ıphed in a horizontal position with bases e processed in the ImageJ software. The esser palatine foramina are detected by

tance of greater palatine foramen from ɛ was 15.85 mm on the right and 16.11 ın to the posterior edge of bony palate, 2.01 mm and 2.01 mm. Statistical sig- e comparison of the angle between the incisive fossa and median palatine su- percentage of skulls (82%) had a greater at the level of the third molar. Lesser ɔt observed on the 13 skulls. The largest d one small opening (44%).

**Conclusion:** The palatal angle showed statistical significance in relation to the side of the skull. The greater palatine foramen is most often located at the level of third molar. The largest number of examined bony plates had one small opening.

# P12

## FEATURES OF ANGIOGENESIS IN MYOCARDIAL TISSUE DURING CHRONIC EXPOSURE OF PESTICIDES

**Rakhmanov S, Zhanabayeva Aigul**
*West Kazakhstan Marat Ospanov State Medical University, Aktobe, Kazakhstan*

The rapid development of the study of the cardiovascular system in the last decades, in addition to other fields of science addresses number of issues. Nowadays, anatomy of the coronary arteries of the heart, angiogenesis in the myocardium and the changes in them due to environmental factors interest to scientists.

Therefore, our study of pesticides often used in the agricultural we conducted study of heart tissue histologic and immunohistochemical methods for the study of cardiac tissue byforming chronic model of poisoning by giving mice per os for 2 months. In this study portion of the research project, the vascular endothelial growth factor (VEGF) indices of the left ventricle in the myocardium were compared with the control group.

The result of the study shows that there was no significant change in pesticide poisoning compared the control group, both blood vessels were small and densities remained unchanged. In the experimental group, the blood vessels in subepicardial layer were significantly higher (1.5times) than in the control group. Meanwhile, VEGF-expressing cells were identified in two groups (positive). VEGF-expression in conjunction with control group in the study group was found in vascular vessels muscle cells except endothelial cells. Absence of clear changes in comparison with the control group in myocardial tissue poisoning with pesticides maybe indication adaptation reaction to that environment. However, an increase blood vessel density in subepicardial part can be attributed to the appearance of VEGF-expressing cells in accordance with the depth of blood vessels and the mechanisms of the emergence of new blood vessels leading endothelial layer permeability or cellular migration.

# P106

## DISTRIBUTION OF THE PERIKARYA OF THE MOTOR NEURONS OF GENIOHYOID MUSCLE IN RATS

**Razlan AN[1], Ullah M[1], Kapitonova Marina[2], Liaqat Ali Khan N[1], Fuad SB[3]**
*[1]Faculty of Dentistry, UiTM, Sungai Buloh, Selangor, Malaysia*
*[2]Faculty of Medicine and Health Sciences, UNIMAS, Kota Samarahan, Sarawak, Malaysia*
*[3]Faculty of Medicine, UiTM, Sungai Buloh, Selangor, Malaysia*

**Introduction**: The geniohyoid muscle is involved in deglutition and respiration, moving the hyoid bone forwards and upwards and assisting in depression of the mandible. In the literature data regarding the location of its motor neuron bodies are contradictory. The objective of this study is to determine localization of the bodies of the motor neurons of the geniohyoid muscle in rats using horseradish peroxidase (HP) technique.

**Material and Methods**: Right geniohyoid muscle was exposed in nine Sprague-Dawley rats under anaesthesia, and 20-50 mcl of 30% solution of HP was injected into it. After 48 hours normal saline, 1.25% glutaraldehyde and 1% buffered paraformaldehyde were perfused through the left ventricle at room temperature, followed by perfusion of the 10% buffered sucrose at 4°C. The medulla oblongata and first cervical segment of spinal cord were sampled, immersed in the 10% buffered sucrose at 4°C for 24 hours. Serial transverse 60 mcm sections were cut in the cryostat and stained by tetramethyl benzidine-HP method.

**Results and Conclusion:** Perikarya of the motor neurons of the geniohyoid muscle labelled by HP were mainly discovered in the ventral part of the right hypoglossal nucleus in the upper two-thirds of the closed part of the medulla oblongata, as well as in the ventrolateral subnucleus of hypoglossal nucleus in the lower one-third of the closed part of medulla oblongata, and in the dorsomedial part of right anterior grey column at spinomedullary junction. Our results specify data regarding location of the bodies of the geniohyoid motor neurons in mammals.

# P59

## ANGIOGRAPHIC STUDY OF THE ANATOMICAL CHARACTERISTICS OF THE CORONARY ARTERIES IN COLOMBIAN POPULATION WITH RISK FACTORS FOR CARDIOVASCULAR DISEASE

**Rivera Cardona Guillermo**
*Department of Basic Health Sciences, Pontificia Universidad Javeriana, Cali, Colombia*

**Introduction:** Anatomical variations of coronary arteries are related with ischemic myocardial, arteriosclerosis and sudden death, therefore is necessary that the doctor knows the origin, journey, branches and endoluminal aspects of coronary arteries.

The aim was to determinate the relation between anatomical characteristics of the coronary arteries by angiography and risk factors for cardiovascular disease in Colombian population.

**Material and Methods:** In 200 coronary angiographies (141 male and 59 female), the origin of the right coronary, left coronary, anterior interventricular and circumflex arteries and coronary dominance were analyzed and coronary permeability in their 29 segments was evaluated. Statistics methods for the relation between anatomical coronary characteristics and risk factor for cardiovascular disease were used.

**Results:** There were variations in the origin of coronary arteries (3%), mostly for right coronary artery in male. Coronary dominance most frequently was right. Ramus intermedius was presnt in 9,5%. Anterior interventricular branch was occluded mostly in male (p=0,926). Risk of vascular disease for circumflex branch is mostly for female and it was related with smoking. Segment coronary arteries mostly occluded were 13 and 18.

**Conclusions:** Anatomical characteristics of coronary arteries of Colombian population are similar with other population (European and Asian).

# P23

## LACTATE AND HIGH INTENSITY INTERVAL TRAINING (HIIT) RAISE LEVELS OF STEM CELLS IN THE PERIPHERAL BLOOD OF PATIENTS WITH METABOLIC DISEASES AND IN MURINE MODELS

**Rivera C, Pasmiño G, Gatica N, Astudillo J, Silva H, Díaz E, Iturra A, Castillo M, Montiel-Eulefi Enrique**
*Biomedicine Laboratory, Embriology Unit, Departamento de Ciencias Básicas, Facultad de Medcina, Universidad de La Frontera, Temuco, Chile*

**Introduction:** HIIT has had a great impact in improving health and optimising physical performance in patients. In HIIT models, lactate is used as an indicator of the anaerobic metabolism in blood. Lactate raises the phenotype of stem cells (SC) in cell cultures. The aim of this study was to demonstrate that the effect of HIIT on stem cells in peripheral blood is produced by a rise in lactate levels.

**Methods:** Patients with metabolic alterations, BMI>25 and sedentary life, were subjected to HIIT on static bicycle with fatigue after 1 minute, followed by 2 minutes of rest, repeated 10 times, for 1 month. Sprague Dawley rats were subjected to swimming HIIT daily with weight attached to tails, for two months. The lactate levels were measured. We also assessed the effect of lactate injections [10mmol/l], concentration equivalent to the maximum observed in the HIIT group in rats which did not do any exercise. The SC phenotype and quantification were determined by flow cytometry.

**Results and Conclusion:** In the murine model, HIIT by swimming exercise effectively increases lactate. The rise in lactate due to HIIT was significant when compared to the controls, and was correlated with an increase in stem cells, principally mesenchymal cells, in peripheral blood in both patients and the murine model. The lactate injections also produced an increase in stem cells, and lactate may therefore be an inductive signal rather than a metabolic product. This explains why HIIT exercise could be used as a model for regenerative treatment with endogenous adult stem cells.

*Funding: DIUFRO Project DI14-0051.*

# O8

## COMPARISON OF THE INHIBITORY CORTICAL SYSTEM IN THE TRANSITORY NEO-ALLOCORTICAL REGIONS

**Salaj Martin[1], Druga R[1,2], Kubová H[2], Barinka F[4]**
*[1]Department of Anatomy, Second Faculty of Medicine, Charles University, Prague, Czech Republic*
*[2]Institute of Physiology, Czech Academy of Sciences, Prague, Czech Republic*
*[3]Klinik und Poliklinik für Neurologie, Universität Regensburg, Regensburg, Germany*

**Aims:** This study describes interneuronal population expressing calcium binding proteins calretinin (CR) and parvalbumin (PV) in the perirhinal (PRC) and retrosplenial (RSC) cortex of the rat. These two cortical areas differ strikingly in their connectivity and function, which could be caused also by different structure of the interneuronal populations. Having a precise knowledge of the cellular composition of any cerebral area is important for understanding some pathological conditions, like generating and spreading of epileptic activity.

# CERTIFICATE OF PARTICIPATION

We hereby certify that

## Prof. Dr. Marina KAPITONOVA

UNIMAS, Malaysia

has participated in the

## XXVI International Symposium on Morphological Sciences

## ISMS 2018

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David Kachlík

Prof. David Kachlík, M.D., Ph.D.
*President of the Symposium*

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### PAYMENT CONFIRMATION

**ISMS 2018**
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Registration / Invoice No.: 1808434511

**UNIMAS**
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Kota Samarahan
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| Registration Fee<br>Regular participant | 6570,25 CZK | 21% | 1379,75 CZK | 7950,00 CZK |

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E-POSTER PRESENTATIONS

**STAND 1**

MORPHOLOGY (15)

**E-poster session 1 (Friday, July 6, 10.40–11.00)**

P1. Influence of sodium valproate on glioblastoma u87 cell line tumour behaviour on the chicken embryo chorioallantoic membrane
Balnytė Ingrida, Kavaliauskaitė D, Stakišaitis D, Šlekienė L, Valančiūtė A
Lithuania

P2. Study of the cardiovascular system of rats with experimental ischemia
Burpiev Nurslutan, Abaeva TS, Aliyeva M, Asmatov A, Karkymbayev U, Utegenov U, Zhurabekova G
Kazakhstan

P3. Surgical model with fibrin glue to induce endometriosis in female rats
Almeida-Francia Camilla Contin Diniz, Francia-Farje LAD, Brito CP, Filadelpho AL
Brasil

P4. Analysis of surface nerve repair with pig heart valve tube
Francia-Farje Luis Alberto Domingo, Cunha JF, Souza DL, Peres JA, Almeida-Francia CCD, Filadelpho AL
Brazil

P5. The posttraumatic regeneration of long bone diaphysis in animals with chronic hyperglycemia
Tkach G, Maksymova Olena, Dudchenko Y, Illiashenko V, Tymoshenko A
Ukraine

**E-poster session 2 (Friday, July 6, 13.40–14.00)**

P6. Evaluation of male reproduction in conditions of obesity and streptozotocin-induced diabetes mellitus in adult rat
Pavlova Ekaterina, Lakova E, Yochkova S, Donchev M, Popovska S, Svechnikov K, Atanassova N
Bulgaria

P7. Comparative effects of monensin, salinomycin and DMSA on mouse spermatogenesis after subacute cadmium intoxication
Pavlova Ekaterina, Kamenova K, Dimova D, Gluhcheva Y, Petrova E, Ivanova JU, Atanassova N
Bulgaria

P8. Effect of monensin on lead-induced neurotoxicity in mouse cerebellum
Petrova E, Kamenova K, Gluhcheva Y, Pavlova Ekaterina, Ivanova JU
Bulgaria

P9. Hematotoxic effect of lead and cadmium nanoparticles of different sizes: experimental study
Apykhtina O, Gubar I, Korsak A, Sokurenko Liudmyla
Ukraine

P10. The effect of sodium dichloroacetate and the sodium dichloroacetate-sodium valproate combination on Hassall's corpuscles expression in rat thymus
Staneviciute J, Valanciute A, Balnyte I, Stakisaitis D, Vosyliute Ruta
Lithuania

**E-poster session 3 (Friday, July 6, 16.00–16.20)**

P11. Structure characteristics of the early stages of skeletal muscles regeneration under chronic hyperglycemia conditions
Tkach Gennadii, Maksymova O, Rtail R, Dobvyk Y, Muravskyi D
Ukraine

P12. Features of angiogenesis in myocardial tissue during chronic exposure of pesticides
Rakhmanov S, Zhanabayeva Aigul
Kazakhstan

P13. Morphological indices of the myocardial layer during chronic poisoning with sodium bichromate under experimental conditions
Zhumabay Nurkanat, Tulepbergenova DN, Rakhmanov SB
Kazakhstan

P14. Influence of boron compounds on morphological changes of the liver
Berdalinova A, Balmagambetova A, Ramankulova A, Egemberdieva R, Zakirova A, Zhurabekova Gulmira
Kazakhstan

P15. Analysis of locomotor activity in calcaneal (Achilles) tendon therapy
Keles-Celık Nigar, Sekercı R, Akcay G, Ogut E
Turkey

MOLECULAR AND CELL BIOLOGY (13)

**E-poster session 4 (Saturday, July 7, 10.40–11.00)**

P16. Novel biomarkers for the diagnosis and evaluation of chronic pancreatitis by untargeted metabolomics
Caba Octavio, Dieguez C, Martin-Blazquez A, Jimenez-Luna C, Perez del Palacio J, Diaz-Navarro C, Martin JL, Vicente-Perez F, Rojas I, Prados JC
Spain
~~Ultrastructural aspects of activated intraepithelial mast cells in Helicobacter pylori gastritis and in gastric adenocarcinomas~~
~~Caruso Rosario A, Rigoli L~~
~~Italy~~
~~Differentiation of iPSCs into pancreatic β-cells and their potential for diabetes mellitus stem cell-based replacement therapy~~
~~Csobonyeiová Mária, Lorencová M, Vrabcová M, Polák Š, Danišovič Ľ~~
~~Slovakia~~

P17. Chlorogenic acid improve LPS-induced hepatic steatosis by up-regulated autophagy
Cui Zhigang
China

P18. Expression and correlation of HIF-1α and HSP70 in placenta of patient with pregnancy induced hypertension
Lan Yong-Hong, Rao LY, Yang Z, Huang MM, Niu HY, Qi YL
China

P19. Extracellular ATP as a pro-invasive factor in tumor microenvironment
Fang Wei-gang, Tian XX, Li WH, Qiu Y
China

**E-poster session 5 (Saturday, July 7, 13.40–14.00)**

P20. Site specific serine phosphorylation of insulin receptor substrate 1 (IRS1) protein inhibits the proliferation of cervical carcinoma cells
Gorgisen Gokhan, Gulacar IM, Tuluce Y, Ozkol H, Kaya Z
Turkey

P21. Calcium/calmodulin-dependent protein kinase IV mediates IFN-γ-induced immune behaviors in skeletal muscle cells
Gu RC, Ding MC, Shi DD, Huang T, Guo MX, Yu L, Hu JJ, Huang WH, Liao Hua
China

~~SMP30 and GP96 protein stimulating of dendritic cell vaccination induces more potent CTL response against hepatoma~~
~~Huang R, Zhao F, Guo J, Zhang YY, Chao NX, Pan J, Chen CX, Luo Guorong~~
~~China~~

P22. Co-expression of Cdr1as and miR-7a is associated with hypoxia-affected fetal brain development
Lv Ye-Hui, Li ZH, Wang XY, Li K
China

P23. Lactate and high intensity interval training (HIIT) raise levels of stem cells in the peripheral blood of patients with metabolic diseases and in murine models
Rivera C, Pasmiño G, Gatica N, Astudillo J, Silva H, Díaz E, Iturra A, Castillo M, Montiel-Eulefi Enrique
Chile

**STAND 2**

**E-poster session 1 (Friday, July 6, 10.40–11.00)**

~~Expression of vascular endothelial growth factor-a in o. Viverrini cholangiocarcinoma (O-CCA) and induction of anti-angiogenic VEGF-$A_{165}$B isoform in O-CCA cell line by sulfated galactans~~
~~Sae-Lao Thannicha, Pakpoom T, Noppadol L, Bates DO, Wongprasert K~~
~~Thailand~~

P24. A method of principal component analysis to facilitate tumor localization based on dynamic fluorescence molecular imaging
Gao Y, Chen M, Wu J, Zhou Y, Cai C, Wang Daliang, Luo J
China

P25. Signalling mechanism of Rh0 a in bone marrow mesenchymal stem cells stress fiber formation and cell migration
Wang Xueer, Zhang L
China

P26. Knock-out SST gene with CRISPR/cas9 enhancing migration and invasion of gastric cancer cell BGC-823 and the expression of early-onset gastric cancer-associated potential driver mutations SEM and KLF
Zhang Qinxian, Chen W, Zhu XY
China

P27. Prognostic significance of tissue estrogen receptor alpha and beta expression in Chinese female patient with esophageal squamous cell carcinoma
Zhang Dongyun, Liu RZ, Wang LD
China

P28. Role of WNT signaling in the pathogenesis of ameloblastoma
Putnová Barbora, Hrubá E, Putnová I, Štembírek J, Daněk Z, Buchtová M
Czech Republic

HISTOLOGY (18)

**E-poster session 2 (Friday, July 6, 13.40–14.00)**

P29. Morphometric study in thyroid tissue stimulated by infrared laser
Cornejo Ricardo, Campos E
Chile

P30. Age related changes of the pinealocytes of the rat pineal gland and the possible protective role of vinpocetine: ultrastucture study and clinical significance
Aziz Joseph
New Zealand

P31. Effect of graded doses of acetylsalicylic acid on sperm chromatin integrity and sex hormones in adult male mouse
Faghani Masoumeh, Mohammadghasemi F
Iran

P32. Mucosal nervous tissue and inflammatory infiltrate in appendicitis
Markovs J, Melderis I, Knipse G, Krumina D, Galuza Agate
Latvia

P33. Preventive and therapeutic administration of melatonin increases c-fos immunoreactivity in motor cortex in mice breast cancer model
Goksu Asiye Kubra, Akcay G, Erin N, Derin N, Tanriover G
Turkey

~~Regression and correlative analysis study of the graft length for reconstruction of medial patellofemoral ligament~~
~~Işıklar Sefa, Babacan S, Özdemir S~~
~~Turkey~~

~~Regression and correlative analysis study of the graft length for reconstruction of lateral patellofemoral ligament~~
~~Işıklar Sefa, Babacan S, Özdemir S~~
~~Turkey~~

**E-poster session 3 (Friday, July 6, 16.00–16.20)**

P34. Vascular endothelial growth factor (VEGF), human beta-defensin-2 (HBD-2) and hepatocyte growth factor (HGF) appearance in congenital intra-abdominal adhesions in children under one year of age
Junga Anna, Pilmane M, Ābola Z, Volrāts O
Latvia

P35. Crown-like structures in the epicardial and subcutaneous fat of patients with obesity and ischemic heart disease
Kučera Tomáš, Kloučková J, Lindner J, Lipš M, Haluzík M
Czech Republic

P36. Effect of hydro-alcoholic and aqueous extract of Viola odorata L. on histological and biochemical parameters in pancreas of diabetic male rats
Mohammadghasemi Fahimeh, Gazor R, Aghajani-Nasab M, Niknezhad F
Iran

P37. Immunocytochemical analysis of the distribution of smooth muscle fibers in the spleen of domestic animals
Molina Benedicto, Pardi P, Olave E
Chile

P38. Quantification of the immunohistochemical expression of MART-1 by integrated optical density in melanocytic lesions
Paredes Marco, Navarrete F, Vasconcellos A
Chile

**E-poster session 4 (Saturday, July 7, 10.40–11.00)**

P39. Quantification of macrophages in right atrium, epicardial fat and subcutaneous fat in cardiovascular surgery patients
Pierzynová Aneta, Kučera T
Czech Republic

P40. Changes in the liver in the presence of hemorrhagic stroke: experimental study
Motorna N, Sokurenko Liudmyla, Gumenyuk A, Savosko S, Kaminsky R, Demydchuk A, Shamalo S, Chuhray S, Shobat L, Chaikovsky Y
Ukraine

P41. Fractal-based analysis of the microvascular pattern in the histological sample of the adipose tissue
Šrámek Jaromír, Kučera T
Czech Republic

P42. Small cell lung cancer tumor growth inhibition and reduction of EZH2 and p53 expression under influence of sodium valproate using the chicken embryo chorioallantoic membrane
Šlekienė L, Vosyliūtė Rūta, Stakišaitis D, Mozūraitė R, Balnytė I, Valančiūtė A
Lithuania

P43. Carbonic anhydrase IX and its correlation with hypoxia inducible factor 1α in colorectal cancer
Tupá Veronika, Drahošová S, Klinerová B, Grendár M, Adamkov M
Slovakia

**E-poster session 5 (Saturday, July 7, 13.40–14.00)**

P44. Effect of L-carnitine supplementation on apoptosis in the cochlea of aged rats
Tas Gizem Gamze, Akcay G, Danisman B, Derin N, Sati L, Derin AT
Turkey

P45. Investigation of possible oxidative damage caused by formaldehyde exposure in the rat's heart and aorta tissue
Tasdemir Rabia, Acar E, Colak T, Hunc F, Bamac B, Kır HM, Eraldemir C
Turkey

P46. Detection of mast cells in the feline uterus by two different staining methods
Hamouzova Pavla, Cizek P, Bartoskova A
Czech Republic

**STAND 3**

ANATOMY (20)

**E-poster session 1 (Friday, July 6, 10.40–11.00)**

P47. The morphological analysis of the symmetry of distal radius in adults
Deng Yu-ping, Xie PS, Wang M, Tan JC, Ouayng HB, Lin H, Huang WH
China

P48. Anastomosis between the lingual and mylohioid nerves in a mestized population of the Colombian surchcient
Torres MF, Bonilla V, Rúales S, Fernández Sánchez Andrés, Orbes Portilla JO, García Garcés BH, Beltrán Angarita L, Martínez Niño CE, Marín Arias D, Marín Arias D, Rojas Puerta ME, Serrano Gelvez PD, Restrepo Ocampo FA, Velásquez Peña DA, Solarte Manquillo AF, Gutiérrez Mendoza MP, Acevedo Salazar CD, Guzmán Franco AM
Colombia

P49. A new method of biostorage and biopreservation for human amputated extremities
Luo Jia, Zhou H, Rao L, Liu T, Liu L, Chen Y, Wang J, Hu T, Liu S, Chen D, Wang H, Zeng L, Hang JF
China

P50. Different image perspectives of the lateral acromial length
Naidoo Nerissa, Lazarus L, Osman SA, Satyapal KS, Van Tongel A
United Arab Emirates

P51. Morphometric anatomical variations of the posterior cerebral artery
Abuelnour Mohammed Ahmed, Goomaah HM
Saudi Arabia

**E-poster session 2 (Friday, July 6, 13.40–14.00)**

P52. Investigation of nerve conduction velocity of tibial nerve, sural nerve and common fibular nerve in soccer players
Aksu Elif, Colak T, Selekler HM, Colak E, Mülayim S, Son M, Bamac B, Colak S
Turkey

P53. An evaluation of antibacterial efficacy of modified Larssen solution
Yeğin ME, Koçer IB, Tiftikçioğlu YO, Çelik S, Bilge Okan
Turkey

P54. Descriptive anatomy of bones from skulls of anencephaly
Binvignat Octavio, Torres JC Cruzat C, Olave E
Chile

P55. Grooves and bony canal of the middle meningeal artery in the middle cranial fossa: mythic structures in anatomy and neurosurgery?
Eberlova Lada, Pisova S, Papezova L, Mirka H, Hosek P, Mik P, Kachlik D, Tegl V, Steflova M, Frcek J, Stepanek D
Czech Republic

P56. The application of 3D printing of cardiac fiber skeleton and valves in anatomy teaching
Li Ying, Zhang XQ, Liu L, Tan LW, Zhang SX
China

**E-poster session 3 (Friday, July 6, 16.00–16.20)**

P57. Innervation of the extensor carpi radialis brevis muscle in Brazilian individuals: biometry of its origin and distribution
Pérez L, Sousa-Rodrigues C, Olave Enrique
Chile

P58. Terminology of the branches of the lateral circumflex femoral artery: who is who?
Palackic Alen, Feigl G
Austria

P59. Angiographic study of the anatomical characteristics of the coronary arteries in Colombian population with risk factors for cardiovascular disease
Rivera-Cardona Guillermo
Colombia

P60. Phenomenon of conformal growth of the human heart in ontogenesis
Spirina Galina A, Yalunin NV
Russia

P61. Myocardial bridges in hypertension: friend or foe?
Teofilovski-Parapid Gordana, Kanjuh V, Labudovic-Borovic M, Jankovic R, Virmani R, Danchin N, Simic DV, Cirovic A, Ostojic MC, Parapid B
Serbia

**E-poster session 4 (Saturday, July 7, 10.40–11.00)**

P62. Length of the styloid process of the temporal bone and its relation to sex, age and laterality
Toneva Diana, Nikolova S, Zlatareva D, Hadjidekov V, Dandov A
Bulgaria

P63. Morphological variability of the pes anserinus
Topol Miroslaw, Gonera B, Podgórski M, Polguj M, Olewnik Ł
Poland

P64. Variability of the sciatic nerve course in relation to the piriformis muscle
Topol Miroslaw, Wysiadecki G, Polguj M, Haładaj R
Poland

P65. Communications between the lateral femoral cutaneous nerve of the thigh and the adjacent branches of the lumbar plexus: series of cases
Topol Mirosław, Wysiadecki G, Wojdyn M, Polguj M, Haładaj R
Poland

P66. Fossa vermiana revisited
Kunc V, Fabik J, Kubickova B, Kachlik David
Czech Republic

CLINICAL AND SURGICAL ANATOMY (24)

**E-poster session 5 (Saturday, July 7, 13.40–14.00)**

P67. Topographic-anatomical study of a tunnel syndrome of pudendal neurovascular fascicle
Zhandarov KA, Dydykin Sergey S
Russia

P68. Abdominal ultrasonography parameters in patients with obstructive sleep apnea syndrome
Filipović Branka, Đurić V, Marković O, Crevar-Marinović S, Jelic S
Serbia

P69. Biometric relationships between the left atrioventricular ring and the coronary arteries
Henríquez Jorge P, Pradenas IM
Chile

P70. Anatomical-topographic interrelations of bone phalanges and skin palmar folds of finger segments of the hand
Gal'chin A, Khayrullin Radik, Filippova E
Russia

P71. Comparison of traditional physical therapy and Mulligan mobilization technique in treatment of cervicogenic headache
Argali Deniz M, Kose Evren, Bakir M, Yagar D, Ozbag D
Turkey

**STAND 4**

**E-poster session 1 (Friday, July 6, 10.40–11.00)**

P72. Prediction of some related factors for stone-free rate in patients with kidney stones using artificial intelligence modeling
Kose Evren, Arslan AK, Beytur A, Colak C
Turkey

P73. Evaluation of morphometry in extrahepatic bile ducts in preoperative and postoperative periods in diabetic and non-diabetic patients with cholelithiasis
Karataş T, Ozbag Davut, Demirtas G, Senol D, Cevirgen F, Canbolat M, Köse E
Turkey

P74. Morphological study of the deep femoral artery and its branches
Łabętowicz P, Olewnik Ł, Podgórski M, Kiciński P, Wysiadecki G, Topol M, Polguj Michał
Poland

P75. Sex-related differences in the orbital area of Bulgarians: a 3D laser scanning study
Petleshkova T, Sivkov S, Manev H, Raycheva R, Timonov Pavel, Baltadjiev A, Manev M, Yordanova M, Yordanova S, Vladimirov B, Zhecheva Y, Ivanova-Pandurska I
Bulgaria

P76. Structural peculiarities of gallbladder in ultrasonographic and computer-tomographic images
Vasyliv Marta AL, Zubko LY, Masna ZZ, Sernyak VR, Chervinska MY
Ukraine

**E-poster session 2 (Friday, July 6, 13.40–14.00)**

P77. Retrospective analysis of safe zones of facial arteries for minimally invasive procedures in open source Osirix software
Yildiz Yilmaz Meric, Nas OF, Ozdemir S, Hakyemez B, Coskun I
Turkey

P78. Anatomy teaching when there are no corpses: the experimental animal model porcine as a tool for the development of surgical skills in students of human medicine, nursing, dentistry and veterinary medicine
Fernández Sánchez Andrés, Fontal Vargas PA, Beltrán Angarita L, Salazar López GA, Orbes Portilla JO, Martínez Carlos EN
Colombia

P79. Animal model of upper-airway injury and stenosis treatment
Grigorevskiy Evgeny, Kudryavitsky E, Safronova E, Dydykin S, Kolchenko S, Piskunova N, Perfil'yev I, Romanova O, Panteleyev A
Russia

P80. Topographic-anatomical changes after removals of internal organs as the composite part of modern clinical anatomy
Kagan Ilya Iosifovich, Tretyakov AA, Chemezov SV, Vasukov MN, Rykov AE, Safronova UV
Russia

P81. Anatomical analysis of complex tibial fracture using patient specific 3D models
Ozturk M, Ozer MA, Suer O, Karakas Asli Beril, Govsa F
Turkey

**E-poster session 3 (Friday, July 6, 16.00–16.20)**

P82. Primary femoral nerve entrapment: a case report
Fahrıoglu Sevda Lafçı, Gurkanlar D, Uygur ER
Northern Cyprus

P83. CT-scan changes after the postpneumonectomic cavity plasty in experiment
Liashchenko Sergei N, Vasyukov MN, Vasyukov AM, Filippov MV, Karasartov TS
Russia

P84. Selection of osteosynthetic material and technique in treatment of calcaneal fractures stretching to calcaneocuboid joint, considering anatomical proportions
Bába Vít, Kopp L, Samešová A, Kachlík D
Czech Republic

P85. Cervical vagus nerve morphometry and vascularity in the context of nerve stimulation: a cadaveric study
Hammer Niels, Löffler S, Cakmak YO, Ondruschka B, Planitzer U, Schultz M, Winkler D, Weise D
New Zealand

P86. Sacroiliac joint ligaments and sacroiliac pain: microstructural findings on morphological alterations
Hammer Niels, Fuchs V
New Zealand

**E-poster session 4 (Saturday, July 7, 10.40–11.00)**

P87. Successful treatment of a partial anomalous pulmonary venous connection (PAPVC) with interventional transcatheter closure
Liu Ye, Wang L, Zhang F
China

P88. Personalized medicine with anatomical model as life size patient specific lumbar fracture
Ozturk M, Ozer MA, Karakas Asli Beril, Suer O, Govsa F
Turkey

P89. Effect of different lengthening distance on vertebral column stability after pedicle-lengthening osteotomy
Ouyang Jun, Qian L, Sun P, Zhong S
China

P90. Morphometric study for restoration of external ear by bony landmarks: preliminary test
Kim Deog-Im, Lee WB, Han SH
South Korea

COMPARATIVE ANATOMY (5)

**E-poster session 5 (Saturday, July 7, 13.40–14.00)**

P91. Body structure and nutrition of 5–8 year-old children and its correlation on the form of the hand: a pilot study
Salinas E, Aufartová Jana, Aguilar Vilas MV, Rodríguez Torres R, Alonso-Rodríguez MC
Spain

P92. Comparative analysis of the mineral composition of bone tissue of the jaws in human and experimental animals
Vasyliv Marta AL, Chervinska MY, Pavliv KhI, Sohujko RR, Cherkes MB, Kotsarenko MV, Masna-Chala OZ
Ukraine

P93. Morphometric differences between sexes of Darevskia rudis in a breeding population
Kutrup Bilal, Bülbül U, Kurnaz M, Koç H
Turkey

P94. Morphological comparison on the populations of Podarcis siculus in Turkey
Bülbül U, Kutrup Bilal, Eyüboğlu Z
Turkey

P95. Morphological comparison on the populations of Darevskia clarkorum in Turkey
Bülbül U, Odabaş Y, Kutrup Bilal
Turkey

**STAND 5**

NEUROSCIENCE (24)

**E-poster session 1 (Friday, July 6, 10.40–11.00)**

P96. Morphological changes of glial cells in the hypothalamus in obesity
Vrabcová Michaela, Lorencová M, Csobonyeiová M, Polák Š
Slovakia

P97. Segmental innervation of the lateral rectus muscle evaluated using Sihler's staining technique
Topol M, Wysiadecki G, Polguj M, Haładaj Robert
Poland

P98. MIR-200A suppresses glioma cell migration and invasion via directly targeting MAGED4
Zhang Qingmei, Wu H, Yan J, Luo B, Liu C, Ge Y, Chen F, Xiao SW, Xie XX
China

P99. Use of dendritic cells loaded with MAGED4 recombinant protein to generate cytotoxic T-lymphocytes against glioma
Zhang Qingmei, Bi S, Luo B, Ge Y, Liu C, Fang C, Xiao SW, Xie XX
China

P100. NY-SAR-35 involved in glioma tumorigenesis: a promising target for prognosis and therapy
Zhang Qingmei, Luo B, Peng Y, Wei Z, Ge YY, Chen F, Liu C, Xiao SW, Xie XX
China

**E-poster session 2 (Friday, July 6, 13.40–14.00)**

P101. Development of a 3D-cell culture model for adipose-derived stromal/stem cells
Zwierzina Marit, Amann A, Ejaz A, Hatzmann F, Kern J, Konschake M, Lorenz E, Pierer G, Fritsch H, Zwerschke W
Austria

P102. Effects of biotin deficiency on learning and anxiety during prenatal and postnatal periods
Akcay Guven, Danisman B, Derin N
Turkey

P103. Surfactant protein H – a protein of the tear film, that lowers surface tension, is increased in dry eye disease and accelerates corneal wound healing
Bräuer Lars, Schicht M, Hartjen N, Beileke S, Garreis F, Jacobi C, Sahin A, Holland D, Paulsen F
Germany

P104. Agrin regulates target-selective peripheral nerve regeneration by nano-5-FU ethosome
Feng Zhujun , Xu H, Chen J, Ma A, Li F, Wo Y
China

P105. Anatomical description of the intracranial relations of the trochlear nerve
Orbes Portilla JO, Fernández Sánchez Andrés, García Garcés BH, Beltrán Angarita L, Salazar López G, Martínez Niño CE, Rojas Puerta ME, Marín Arias D, Solarte Manquillo AF, Gutiérrez Mendoza MP, Obando AM, Cruz Sánchez G, María Guzmán FA, Pérez Alzate V, Restrepo Velarde JD
Colombia

**E-poster session 3 (Friday, July 6, 16.00–16.20)**

P106. Microscopic characteristics of extradural lumbosacral nerve roots connections
Haviarová Zora, Matejčík V, Kuruc R, Líška J, Šteňo J
Slovakia

P107. Distribution of the perikarya of the motor neurons of geniohyoid muscle in rats
Razlan AN, Ullah M, Kapitonova Marina, Liaqat Ali Khan N, Fuad SB
Malyasia

P108. Testosterone influences PSD95 expression by non-genomic action via the ZIP9/Gnα11/Erk signalling pathway in mouse hippocampal HT22 cells
Li Sha, Zhang Y, Liu X, Feng B, He Z, Chen H, Cui H
China

P109. The expression of GDNF and p75NTR in the nucleus accumbens during heroin dependence and withdrawal
Li Yi-Xin, Xia BJ, Liang WM
China

P110. Gestational stress inhibits hippocampal HDAC2 expression in offspring in a sex- and age-dependent manner
Liao Libin, Wang XQ, Yao XP, Zhang B, Zhou LH, Tong JB, Huang JF
China

**E-poster session 4 (Saturday, July 7, 10.40–11.00)**

P111. Aquaporin-4 expression is regulated by dystroglycan via ERK/MAPK pathway in scratch-wound astrocytes
Liu Hui, Yang M, Qiu G-P, Zhou F, Xu J
China

P112. Morphological properties of medial amygdala-projecting retinal ganglion cells in the Mongolian gerbil
Luan Liju, He M, Nan Y, Gao J, Pu L
China

P113. Use of a human meibomian gland epithelial cell line to study meibomian gland dysfunction
Garreis F, Adelung S, Abrar DB, Hampel U, Schicht M, Bräuer L, Paulsen Friedrich
Germany

P114. GFAP as biomarker of multiple sclerosis: a review of literature
Sotgiu Maria Alessandra, Madeddu R, Mazzarello V, Montella A, Bandiera P
Italy

P115. Is there any difference between brain cortical thicknesses of deficit and non-deficit schizophrenia patients and healthy controls?
Karakas AB, Tanir Deniz, Polat Nazli I, Gonul AS
Turkey

**E-poster session 5 (Saturday, July 7, 13.40–14.00)**

P116. Morphological analysis of the human occipital cortex
Žigić Sonja, Škrbić D, Samardžija G, Babović SS
Serbia

P117. Cytoarchitectonic organization of verruca hippocampi in human cortex
Bexheti Sadi, Shatri J
Macedonia

P118. Labelling of individual ependymal areas in human brain ventricles: ependymal tables
Lorencová Mária, Mitro A, Csöbönyeiová M, Mikušová R, Kútna V, Polák Š
Slovakia

P119. Assessment of Syringic acid and Deltamethrin with learning and memory tests
Ogut Eren, Sekerci R, Akcay G, Yildirim FB, Derin N
Turkey

**STAND 6**

ANTHROPOLOGY (10)

**E-poster session 1 (Friday, July 6, 10.40–11.00)**

P120. Morphological analysis of symmetry of the lower limbs in Chinese young adults
Lin Ze Yu, Lin H, Deng Yp, Liao Zw, Li D, Yu Qq, Xie Ys, Huang Wh
China

P121. Predicting sex through metric and non-metric analysis of the hard palate and the pyriform aperture
Alves Nilton, Ceballos F, Hernández P, González J, Deana NF
Chile

P122. Markers of occupational stress and bones morphology in Roman necropolis of Monte Carru (Alghero-Italy)
Serra RM, Chessa E, Pomponi V, Mazzarello V, Pirino A, La Fragola A, Manzoni G, Montella A, Bandiera Pasquale
Italy

P123. The greater palatine foramen: morphometric parameters and clinical significance
Radošević Dragana, Knezi N, Ilić A, Marić D, Drvendžija Z, Perić R
Serbia

P124. Male attractiveness and fascial masculinity
Çoban İ, Yaprak Fulya, Derin O, Pınar Y, Gövsa F
Turkey

**E-poster session 2 (Friday, July 6, 13.40–14.00)**

P125. The distal epiphysis of the humerus as an indicator of sex: a forensic proposal
Sepulveda MFI, Reyes BEI, Olave E, Binvignat Octavio
Chile

P126. Evaluation of the relationship between Mallampati score and anthropometric measurements of different somatotypes in 7-17 year old child
Toy Ş, Ozbag Davut, Şenol D,Gülhaş N, Köse E
Turkey

P127. Evaluation of anthropometric and cone-beam computed tomography measurements of anatomical structures, affecting the Mallampati scores
Senol D, Ozbag Davut, Dedeoglu N, Cevirgen F, Toy S, Ogeturk M, Kose E
Turkey

P128. Peculiarities of finger indices of hand 1D:3D and 2D:4D in dependence on gender and type of the constitution
Perepelkin Andrei I, Mandrikov VB, Krayushkin AI, Doronin AB, Matveeva OV
Russia

P129. Analysis of the frequency of the pathological spine curves in individuals of the junior age of different sex and constitution and their effect on digestive, respiratory and cardiovascular systems
Vasyliv Marta AL, Chalyj IVT, Adamovych OO, Adamovych OP, Masna ZZ, Cherkes MB
Ukraine

DEVELOPMENTAL BIOLOGY AND EMBRYOLOGY (8)

**E-poster session 3 (Friday, July 6, 16.00–16.20)**

P130. Ultrastructural analysis of human germinal vesicle stage oocytes during application of assisted reproductive technologies
Antonouli Sevastiani, Belli M, Palmerini MG, Bianchi S, Bernardi S, Cecconi S, Donfrancesco O, Familiari G, Nottola SA, Macchiarelli G
Italy

P131. Morphological study of the influence of gold nanoparticles at last period of the fetogenesis of rats
Khayrullin Radik, Mikheeva N
Russia

P132. Toxic doses of estrogen during pregnancy lead to irreversible changes in the ovaries of the offspring
Khayrullin Radik, Sulaymanova R
Russia

P133. The protective effect of irradiation with red incoherent LED of the hematopoietic tissue of the red bone marrow at skin burns
Stolbovskay O, Salmanskaya A, Khayrullin Radik
Russia

P134. The role of SATb2 in odontogenesis
Nevoranková Petra, Landová M, Buchtová M
Czech Republic

P135. The expression of FZD6 in the successional dental lamina of pig and human embryos
Putnová Iveta, Putnová B, Dosedělová H, Štembírek J, Buchtová M
Czech Republic

P136. Expression and localization of KIF17 in mouse uteri and implantation sites during peri-implantation period
Tas Gizem Gamze, Aksu K, Acar-Aydemir N, Sati L
Turkey

P137. Beta estrogen receptors distribution in the ewe lambs ovary
Vasconcellos C Adriana, Paredes HM, Aguilar GC
Chile

EDUCATION (10)

**E-poster session 4 (Saturday, July 7, 10.40–11.00)**

P138. Questionnaire survey analysis on necessity of cadaveric dissection for nursing students: in scope of nursing students and professors
Kim Deog-Im
South Korea

P139. Survey research on the needs of forensic nursing in undergraduate curriculum
Lee SJ, Kim NY, Kim Deog-Im
South Korea

P140. Should we eliminate conventional light microscopy from histology laboratory course – what do students think?
Kostovski Marko, Kostadinova-Petrova I, Kakasheva-Mazhenkovska L, Mitevska E, Milenkova L.
Macedonia

P141. Styles of medical illustration used in anatomical plates for teaching purposes at the University of Chile
Cárdenas Julio, Dinator M
Chile

P142. Anatomyka – a highly detailed interactive 3D human anatomy atlas
Hudak Radovan, Novysedlak Rene, Galik Maros, Lecko Peter
Czech Republic

**E-poster session 5 (Saturday, July 7, 13.40–14.00)**

P143. Application of mean difference method in students' self- and peer-assessment
Lan Yong Hong, Cui ZG, Niu HY, Zhang YH, Qi YL
China

P144. Application of information technology in anatomy teaching
Zhou Jin, Huang JF, Xiong K
China

P145. An exploration of the anatomy teaching reform based on the integration of organ system
Ma Zhijian, Yi XN
China

P146. Perceptions of South African and Nigerian anatomists on cadaver procurement for teaching and research
Soobramoney Pathmavathie, McQuoid-Mason D, Satyapal KS
South Africa

P147. The use of porcine corrosion casts for teaching human anatomy
Eberlova Lada, Liska V, Mirka H, Tonar Z, Haviar S, Svoboda M, Palek R, Eminger M, Rosendorf J, Kriz T, Bednar L, Mik P, Leupen S, Steflova M, Lametschwandtner A
Czech Republic

**STAND 7**

IMAGING (12)

**E-poster session 1 (Friday, July 6, 10.40–11.00)**

P148. Measuring skin color using digital camera and macro lens with built-in light emitting diode (LED) lamps: a clinical application in esthetic treatment
Hong JH, Kye YC, Seo SH, Ahn Hyo Hyun
South Korea

P149. Course of the mandibular canal and the position of the mental foramen by panoramic X-ray in Chilean individuals
Cartes G, Garay I, Deana NF, Navarro P, Alves Nilton
Chile

P150. Virtuopsy: imagenological description of a mortinate
Fernández Sánchez Andrés, Orbes Portilla JO, Martínez Carlos EN, Orozco Giraldo A, García Garcés B

P151. Creutzfeldt-Jacob disease – cases reports
Kabashi Antigona, Ahmetgjekaj I, Krasniqi E, Shatri J
Kosovo

**E-poster session 2 (Friday, July 6, 13.40–14.00)**

P152. Quantification of intraepidermal nerve fiber density using three-dimensional microscopy
Kim Dai Hyun, Lee SJ, Kim B, Ahn HH, Rhyu IJ
South Korea

P153. Visibility of the mandibular canal in computerized axial tomography using a program of ultra-low dose
Matamala Fernando, Nahuelcura N, Bastías C
Chile

P154. Application of industrial computed tomography for cranial suture examination
Nikolova Silviya, Toneva D, Georgiev I, Harizanov S, Lazarov N
Bulgaria

P155. MRA-based evaluation of anatomical variation of circle of Willis in adult study in tertiary hospital
Shatri Jeton, Nuraj B, Bexheti S
Kosovo

**E-poster session 3 (Friday, July 6, 16.00–16.20)**

P156. Biometric characteristics of the basilar artery in Chilean individuals according to sex and age
Torrez Juan Carlos, Ibarra M, Riquelme N, Olave E
Chile

P157. Three dimensional personalized anatomical models of complex fractures of elbow joint
Coban I, Yaprak Fulya, Ozer MA, Pinar Y, Govsa F
Turkey

P158. Three-dimensional aortic arch patterns models to aid preoperative planning
Yaprak Fulya, Ozer MA, Kesici O, Bedre O, Govsa F
Turkey

P159. Disc herniations in different lumbosacral transitional anatomy types
Matveeva Niki, Chabukovska J, Papazova M, Zhivadinovik J, Zafirova B, Chadikovska E, Bojadzieva B, Dodevski A
Macedonia

NEUROSCIENCE (5)

**E-poster session 4 (Saturday, July 7, 10.40–11.00)**

P160. The Nogo-A maintain the function of TRPV1 in inflammatory hypersensitivity via inhibition of calpain activation
Liu HC, Su DQ, Wang Y, Wang Jun
China

P161. Hypotonic induction of aquaporin5 expression in rat astrocytes through p38 MAPK pathway
Liu XY, Sun SQ, Yang Mei
China

P162. Study on exosomes promoting nerve regeneration and its molecular mechanism
Liu L, Cao YP, Huang HY, Ren R, Tan XH, Li YQ, Liu H, Zhang XF, Fu Y, Huang K, Yi Xi Nan
China

P163. The role of rhynchophylline in alleviating early brain injury and cerebral vasospasm following subarachnoid hemorrhage in rats
Zhang Yan, Zhou Changman
China

P164. Spastin regulates synaptic plasticity through internalization of AMPA receptors
Zhang Jifeng, Cai ZB, Li J, Zhu XN, Chen L, Wu FM, Guo GQ
China

VARIA (4)

**E-poster session 5 (Saturday, July 7, 13.40–14.00)**

P165. Anatomical considerations for the performance of the intra-articular injection technique in the rabbits temporomandibular joint
Molinet MM, Alves Nilton
Chile

P166. Parameters of metabolic syndrome in obese children and adolescents
Kostovski Marko, Gucev Z, Tasic V, Polenakovic M
Macedonia

P167. Werner syndrome: Quantitative Assessment of Skin Aging
Mazzarello Vittorio, Ferrari M, Piu G, Piga G, Decandia S, Sotgiu A, Bandiera P, Ena P
Italy

P168. Dermatoglyphics and clinical research
Chadikovska Elizabeta, Papazova M, Matveeva N, Zafirova B, Bojadzieva B, Trpkovska B
Macedonia