

P-50**The study of the role of genetic polymorphisms of cytokines in the hyperplastic uterogenic processes formation**Goryainova N*, Altuhova O*, Koneva O*, Churnosov M*, Krikun E**, Kapustin R*****Department of Medical and Biological Sciences, Belgorod State University, Belgorod, Russia; **Department of Human Anatomy and Histology, Belgorod State University, Belgorod, Russia; ***Department of Animal Morphology, Belgorod State Agricultural Academy, Maiskii, Russia*

The aim of the study was to investigate the role of molecular-genetic markers of cytokines in the formation of hyperplastic processes in uterus. Twenty genetic polymorphisms were genotyped [-308 G/A TNF α , +250 A/G Lt α +36A/G by TNFR1, -322VNTR TNFR2, -889 C/T IL-1A, -511 With/t IL-1B, IL-1RA, -584C/t IL4, -703C/T IL-5, -174 G/C IL-6, -251 A/T IL-8, -T113M IL-9, -592 C/A IL10, A/T MIP-1 (rs1719153), +764 G/with MCP-1, -801 G/A SDF-1, G/A I-tac (rs4512021), -403 G/A RANTES, C/T MIG (rs28694761), C/T IP-10 (rs867562)]. The investigated sample included 687 patients with hyperplastic uterogenic processes (hysteromyoma n=221, adenomyosis n=223, endometrial hyperplasia n=243) and 246 women of population control. The molecular and genetic markers, which associated with formation of hyperplastic processes in uterus, were identified. Risk factors for hysteromyoma were: +250GG Lt α (OR = 2.74, R = 0.005); - 889C IL-1A (OR = 1.37, R = 0.02); - 889CC IL-1A (OR = 2.32, R = 0.04), endometrial hyperplasia - +36AG TNFR1 (OR = 1.87, R = 0.002). The concentration of genotype +36 GG TNFR1 (5.13 %) for patients with hysteromyoma accompanied with adenomyosis, was four times less compared with the control group (22.93%, p=0.048), and the differences in frequency of allele +36 G TNFR1, between these groups, reached 150% (p=0.006). Patients with hysteromyoma, accompanied by hyperplastic uterogenic processes, had high frequency of genitals inflammatory diseases (85.71%, p=0.013) and the greatest prevalence of the genetic markers -308 and (17.33%) and - 308 AA TNF α (8.00%) (OR=1.91 - 13.57, p=0.03). The maximum concentration of these markers was observed in cases when the hysteromyoma was accompanied by the polip of endometrium.

Keywords: Hyperplastic processes, molecular-genetic markers**P-51****Correlation in blood supply to bladder and prostate during various phases of vesical functional activity**Kabanova I*, Kirpatovskiy V*, Kapustin R****Department of Experimental Urologic Disease Modelling, Research Institute of Urology, Moscow, Russia; **Department of Animal Morphology, Belgorod State Agricultural Academy, Maiskii, Russia*

To study peculiarities of hemodynamics in prostate and urinary bladder in dependence on bladder filling with the help of high resolution impedancometry and harmonic analysis. In experiments with mature random bred dogs (n=4) and rats (n=11), the small variations of vesical and prostatic impedance were recorded and analyzed with harmonic (Fourier) technique

in the void bladder and during its progressive filling via a cystostomy tube. Simultaneously, intravesical pressure and ECG were recorded. Blood supply to these organs was assessed with effective pulsatile impedance (EPI) derived from the cardiac harmonics in the impedance spectrum. Both dogs and rats demonstrated similar changes in blood supply to the examined organs. During bladder filling, the intravesical pressure rose from 2.6 \pm 0.9 to 36.7 \pm 4.8 cmH₂O in rats and dogs. During filling, vesical EPI increased by 48 \pm 8% in rats and by 53 \pm 9% in dogs. At the same time, prostatic EPI decreased by 49 \pm 7% in rats and by 77 \pm 10% in dogs. The urinary bladder and prostate in dogs and rats demonstrate the opposite changes in blood supply during progressive filling and voiding of the bladder.

Keywords: Impedance, prostate, urinary bladder, blood supply**P-52****Age's x-ray anatomy of skeleton scapular waist and forelimb of sheep prikatusky type Gornoaltay breed in postnatal ontogenesis**Rydinskaya N*, Galtsova Z*, Kapustin R****Department of Animal Anatomy and Histology, Altai State Agricultural University, Barnaul, Russia, **Department of Animal Morphology, Belgorod State Agricultural Academy, Maiskii, Russia*

The purpose of the research is to find durations of appearance focuses of ossification bones of scapular waist, stylopodium (humerus), zygopodium (forearm) and autopodium (proximal phalanx) of sheep of Prikatusky type in postnatal ontogenesis. The samples were taken from nine sheep of Prikatusky type of Gornoaltay breed at age of 1, 4 and 12, months of Altai (Russian gerion). Proximal phalanx, of a one month old sheep has lateral and medial focuses of ossification in both distal and proximal parts. An X-ray of a 4 month old sheep shows, that the scapula still consists of 60% of cartilage. The humerus still has synchondrosis between the collum and the caput. Along the perimeter of semilunar incisur a solid architectonic is observable. Proximal epiphysis matches with metaphysic and suture is in the phase of ossification. 70 % of scapula of 12 month old sheep underwent the process of ossification, synchondrosis are not visible. On lateral surface of humerus there is a small part of metaphysis cartilage. Ossification of skeleton scapular and forelimb of prikatusky type sheep of Gornoaltaysky breed skeleton scapular and forelimb is almost fully ended at age 12 months.

Keywords: Sheep, X-ray, ossification, development, bone**P-53****The role of Ivan Alekseevich Dvigubskiy in Russian morphological terminology of animals formation**Kapustin R. Shilo E*Department of Animal Morphology, Belgorod State Agricultural Academy, Maiskii, Russia*

Ivan Alekseevich Dvigubskiy - physicist, zoologist, botanist, paleontologist, geologist and geographer, doctor of medicine, rector of the Moscow University, honored professor of physics