



composed of special thymic epithelial cells made network. The thymus histological structure of gr. Soya animals is characterized by signs of stimulation of the gland functioning. In the medullary portion, epithelioreticular cells are coarser than in the gr. Control. There are numerous areas of epithelial cells proliferation – Hassall's corpuscles which are well represented and formed by active cells. The relative proportion of the cortex in comparison to the medulla is small. It may indicate thymocytes outflow from cortex, what is confirmed by a significantly less cortex thymocytes quantity  $54,4 \pm 1,7$  in comparison with gr. Control animals  $62,8 \pm 2,1$ ,  $p < 0,01$ . There is absence of edge between cortex and medulla portions on the thymus sections in the gr. GMO, what may be indicator of thymus atrophy and accidental thymic involution. Cortex is very narrow in comparison with medulla, what may be explained by a significantly less cortex thymocytes quantity  $41,7 \pm 1,1$  compared with gr. Control animals  $62,8 \pm 2,1$ ,  $p < 0,001$ . Against the background of epithelioreticular cells hyperproliferation voids in the medulla appear. Keratinised and cystic changed thymic corpuscles are observed. There are seen some fuchsinphilic collagen fibers in the parenchyma what may indicate thymus sclerosis. There are a lot of macrophages in the medulla. Probable thymic reduction may be confirmed by uneven organ edges of capsule.

**Conclusions.** Thus, in thymus histological structure of female rats there are signs of stimulation of the organ functioning after long-term consumption of specific diet (unmodified soybeans and genetically modified soybeans) which has been lasting for 6 month. In addition, the usage of genetically modified products has led to overstrain of organism's defense strength, and morphological confirmation of that is development of accidental thymus involution.

**Korobchanska A. B., Kolisnik I.L., Vasura V., Romanenko V.**  
**MORPHOLOGY OF THE ADRENAL GLANDS UNDER THE INFLUENCE**  
**OF PHOSPHORUS**

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**The aim** of our study was to investigate the structural features of the adrenal glands of rats under the influence of phosphorus detergents, one of the most common ecoantropogenic factors.

**Material and methods.** This morphological study performed on Wistar rats that within 30 days exposed Polifos 124 Tm (substance injected with a metal probe into the stomach). Changes were studied on paraffin sections using conventional histological and histochemical methods (hematoksylyn-eozin, pikrofuksyn by Van Hizonu, Feulgen-Rosenbeka reaction, Brush reaction, the Daniels reaction, and lipid staining on frozen sections by Sudan III).

**Results.** It is established that exposure to phosphate detergents all zones of the cortex, especially the medullar substance show signs of hypertrophy and hyperplasia of even moderate catecholaminsecreted cells. Along with that there are massive focuses of resorption of cells of medullar substance. The nuclei of the cells of the cortex are light, poor by chromatin. While in the cytoplasm of cells of all three zones of the cortex observed pronounced tenden cyto reduce of sudanin clusions, especially in fasciculate zone. The cells of medullar substance increased in size, have illuminated nuclei, that poor by chromatin and



weak response to DNP. Cytoplasm of cells also enlightened, contains small sudan granules which located diffusely through out the all cytoplasm. It turns out poorly expressed stratification of layers of medullar substance.

**Conclusion.** Described changes that associated with a expressed functional tension of cells especially glomerular and fasciculate zones of the cortex and of medullar substance. We found changes in the adrenal glands which can also be an indicator of strengthening of compensatory-adaptive processes in the organ, which is under distress.

**Korobchanska A. B., Kolisnik I.L., Vasura V., Romanenko V. S.**  
**MACRO-MICROSCOPIC ANATOMY OF EXTRAORGANIC NERVES OF  
THE ADRENAL GLANDS**

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**The purpose** of this study was to investigate of individual anatomical variability and topography of nerves of the adrenal glands middle-aged people that performed by macro-microscopic preparation on the complexes of organs at the upper storey of the abdominal cavity of dead bodies for V.P. Vorobyov.

**Results.** These preparations allowed us to identify and later on their basis present in the form of anatomical schemes, two main forms of variability of the structure of the main sources of innervation of the adrenal glands – abdominal plexus: dispersed and concentrated. Dispersible form of structure of the abdominal plexus was prevailed in our preparations (21 preparations). We identified the concentrated form of structure of the abdominal plexus in fewer (9 preparations). For disperse form of structure of the abdominal plexus is characterized the presence of 6 and more ganglions in polygonal shape that are placed asymmetrically on the right and left sides of the abdominal aorta. In this form of structure of the human abdominal plexus we additionally described two variants of structure of nerves of the adrenal glands. The first variant - 12 preparations (54% of cases) the prevalence of extraorganic nerves (10 or more trunks) of the left adrenal gland. These second variant - 9 preparations (46% of cases) the prevalence of outside organ nerves of the right adrenal gland. On preparations of concentrated form of structure of the abdominal plexus the last presented by 2 - 4 large ganglions that have semilunar shape. In this case, there is one variant of structure of nerves of the adrenal glands – the prevalence of number of extraorganic nerves of the left adrenal gland.

**Conclusions.** Thus, analyzing the received materials of macro-microscopic anatomy of extraorganic nerves of adrenal glands of human, we can conclude that their anatomy depends on the shape of structure, quantity and features of their sources of blood supply, as well as the forms of structure of the main source of innervation – of the abdominal plexus.

**Kotlobaj M., Ladnaya I.V., Krivchenko Yu. V.**  
**PECULIARITIES OF THE INNERVATIONS OF THE SUPRAHYOID AND  
INFRAHYOID MUSCLES OF THE NECK AND THEIR PRACTICAL  
IMPORTANCE**

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**Introduction.** Study of the problems of skeletal muscles innervation considering an individual variability of their neuromuscular apparatus has great importance in connection