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МАТЕРІАЛИ ТРЕТЬОЇ ВСЕУКРАЇНСЬКОЇ НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ З МІЖНАРОДНОЮ УЧАСТЮ

«ТЕОРІЯ ТА ПРАКТИКА СУЧАСНОЇ МОРФОЛОГІЇ»

ЗБІРНИК НАУКОВИХ РОБІТ

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determining the size of the integrating sphere.

The required correspondence between the radius of the integrating sphere and the size of the specific sample / sample stage results in a physical and technical contradiction, which in principle can be overcome only if a number of conditions are met. The first and obvious one is the equal dimensions of the transmission window of the sample stage and the sample itself. The second prerequisite is one-to-one correspondence between the luminance field of the condenser or another arbitrary collimated light source with the size of the sample located directly on the stage. The final condition is obtaining a wide-field image at the stationary position of the stage, since its displacement inside the integrating sphere will lead to the changes in the light-shadow (schlieren) structure of the registrogram.

The latter requirement leads to an obvious metrological consequence that a simultaneous placement of the sample and the stage in a central position in accordance with the above conditions implies either a contact or a near-field type of the image registration.

Conventional SNOM is not suitable in this case, since the movement of the subwavelength-diameter fiber-optic scanner inside the integrating sphere makes the very principle of integrating the scattered photons and separating the angular background in microscopy with integrating sphere impossible. Moreover, any dynamics and kinematics inside the sphere is a source of perturbations of the light field. The same is true for the movement of the coordinate stage or a slide / sample itself, but for the sample *in vivo* / *in situ* perturbations of the optical field of the isotropic-integrating sphere can be used as an analytical signal.

In a general case, when all the above planes and sections are located at the stationary position at the center of the Ulbricht sphere, the only possible solution is to use CCD / CMOS sensors with a simple printed circuit board, which act as an analytical chip with a function of a lensless projection microscope instead of the reduced conventional optical microscope.

FEATURES OF MACRO - AND MICROSTRUCTURE OF THE LIVER, PANCREAS, STOMACH, SMALL AND LARGE INTESTINES IN THE STUDY OF CHRONIC TOXICITY OF TABLETS «TRIANOL»

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Background. Due to the increased requirement for evaluation of safety, drug safety and toxicological testing of new drugs take one of the most important places in pre-clinical studies.

Objective: to identify features of the macro - and microstructure of the liver, pancreas, stomach, small intestine and colon in the study of chronic toxicity of tablets " Trianol".

Materials and methods. This paper studied the characteristics of macro and microstructure of the liver, pancreas, stomach, small intestine and colon in the study of chronic toxicity of tablets " Trianol". Experiments performed on rats of Vistar line of both sexes weighing 180-230g, obtained from the nursery of the Institute of Pharmacology and toxicology of NAMS of Ukraine, contained in a vivarium and receiving standard diet. When working with experimental animals was guided by the requirements of the "European Convention for the protection of vertebrate animals used for experimental and other scientific purposes" (Strasbourg, 18.03.86). Studied the toxicity of three doses of “Trianol”: minimum (therapeutic) dose for tablets amounted to 50.0 mg/kg, intermediate – 250,0 mg/kg, maximum (subtoxic)– 500,0 mg/kg.

Results and conclusion. It is established that chronic introduction of trianol in a therapeutic dose induces hypertrophy of the gastric mucosa and the appearance of liver hepatocytes with signs of degeneration in cytoplasm. Identified changes are reversible. Intermediate and subtoxic doses cause the appearance of toxic changes in the form of swelling of the mucous membrane of the stomach, degenerative changes in cells and destruction of liver cells that must be considered when prescribing the drug. Immunotoxic action on Peyer’s patch is not revealed.

HIPPOCAMPUS AND DENTATE GYRUS MORPHOLOGICAL CHANGES IN POSTERITY OF FEMALE RATS AFTER RECEIVING PGE2 FOR LABOR INDUCTION

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Relevance. The effect of labor stimulation on the brain structure still remains an unexplored issue.