



international market of herbal products is estimated to be US \$ 62 billion which is poised to grow to US \$ 5 trillion by the year 2050. In the US and Europe, about 65% of patients with liver diseases take herbal preparations.

Nearly half of the agents used in liver therapy today are either natural products or derivatives of natural products. A variety of natural products, mostly from plant sources, contain several active components and have been used for thousands of years by a significant part of the population, and are still used in healthcare in many countries or regions of the world. Natural products have generated a rich source of structurally diverse substances with a wide range of biological activities, which could be useful for the development of alternative or adjunctive therapies. Many natural products have been clinically available as potent hepatoprotective agents against commonly occurring liver diseases.

Nowadays, search of new high effective and safe hepatotropics remains of a topical interest, which promotes expanding the range of products nomenclature on the basis of herbal raw material.

The analysis of literature has shown that in many respects the value of medicinal raw material is determined by the presence of flavonoids of various nature in its content. Due to a wide range of pharmacological activity, flavonoids are applied in medicine as choleric, hepatoprotective, anti-ulcer, capillary strengthening means. Successful combination of low toxicity and high pharmacological activity makes them extremely promising for the preventive medicine and for the treatment of serious diseases.

The data of the systematized literary material have shown the prospects of creating a herbal medicine with hepatotropic action on the basis of the phytocomposition (wild carrot fruits, flowers of chamomile and corn silks).

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FEATURES OF PHOTOPERIODIC CHANGES IN THE STRUCTURE OF MALE RATS' GONADS AFTER PELVIC NEURECTOMY

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Both in male sex glands and in female ones there are seasonal changes due to the illumination rate (photoperiod): with increasing photoperiod in spring and summer time, gametogenesis and hormonogenic function of the gonads get activated, which is accompanied by an increased morphofunctional activity of the accessory sex glands. As photoperiod becomes shorter during autumn-winter season there are reverse changes associated with changes in the activity of the pineal gland and hormone melatonin production. At the same time, there is no information in the literature on possible participation of vegetative innervations in photoperiodic changes in the gonads. Therefore the purpose of our study was to find the role of the parasympathetic innervation of photoperiodic changes in the gonads of laboratory rats.

The study was conducted in spring and summer on 55 nonpubertal male white rats aged 4–5 weeks weighing 40–60 grams. We studied the features of photoperiodic changes in the animals' weight and structure of the testes and their epididymides as well as accessory sex glands (seminal vesicles, prostate gland), morphometric parameters of these glands after bilateral pelvic neurectomy. Photoperiodic changes in animal bodies were simulated for 7 days using continuous illumination, constant darkness and natural lighting during spring and summer season. We measured diameters of convoluted seminiferous tubules and that of the epididymis, height of the epithelium in the epididymis tubule, seminal vesicles and prostate on the sections of histologic specimens.

It was found that in intact and pseudo-operated animals the constant light causes acceleration while the constant darkness slows the development of the gonads. After pelvic neurectomy there is a disorder in the sex glands development, which is more pronounced under natural and constant light. Thus, the pelvic neurectomy deranges adequacy of photoperiodic changes in the gonads in the puberty period.

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PLEIOTROPIC EFFECTS OF STATINS UNDER PREVENTIVE ADMINISTRATION IN RHABDOMYOLYTIC ACUTE RENAL FAILURE

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It is known that increased free-radical oxidation reactions cause damage to the kidney tissues resulting in the development of acute renal failure (ARF). For the treatment of ARF renoprotective drugs with antioxidant activity should be used. Statins reveal renoprotective effects stipulated by their antioxidant activity.

Our research study was targeted at the examination of the effect of some statins (atorvastatin, lovastatin, simvastatin) on pro- and antioxidant systems under the conditions of rhabdomyolytic ARF in case of their preventive administration.

In vivo studies were carried out using 40 white laboratory rats randomly divided into five groups of 8 animals each. Rhabdomyolytic ARF was modeled after 50% glycerol solution injected intramuscularly with the dose of 10 ml/kg. Preventive administration of statins was conducted intragastrically daily 3 days before the simulation of ARF in doses of 10 mg/kg.

As has been found in our experiments, 24 hours after administration of glycerol solution and development of ARF concentration of malonic aldehyde (MA) increased in the kidney tissues of untreated animals in 1.57 times