

191 — got recommendations for medical application with special indications; 108 — did not get such recommendations because of the absence of the reliable clinical information about the safety, 50 of them are not recommended for medical application, because of their toxicity. Among the medicinal plants, which are not recommended for the medical application by commission, there are some traditional medicinal plants in Russian herbal medicine as such *Inula helenium*, *Angelica arch-*

*angelica*, *Calendula officinalis*, *Tussilago farfara*, *Avena sativa*, *Paeonia officinalis*, *Silybum marianum*. Published materials of the commission E are formulated as recommendations, but in fact they have regulatory character. Commission E have paid special attention to diminish the treatment time for some plants with potential toxicity. So, drugs, produced from the natural raw materials, demand the thorough studying with the aim to support the safety of the patients.

## BIOLOGICAL ACTIVE PREPARATIONS FROM HYDROBIONTS

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The biodiversity of the marine environment and the associated chemical diversity constitute a practically unlimited resource of new bioactive substances. Hydrobionts are living in a very exigent, competitive, and aggressive surrounding which demands the production of quite specific and potent active molecules. Search for new anti-inflammatory, anti-allergic, anti-viral, antibacterial, antihypertensive, immunomodulatory, reparative, cytoprotective etc. substances and methods for their isolation are priorities in the study of hydrobionts. The objects of research are fish, sea urchins, gastropods, krill and other crustaceans, corals and algae. Peptides, polysaccharides, fatty acids, enzymes, vitamins and minerals are the most common isolated active principles. Common methods of processing of hydrobionts are focused in isolation of exact group of active substances. However complex processing of marine organism is open broad perspectives in development of new preparations. Chinoid pigments, chitosan, salts of organic Ca, peptides complex, phospholipids, enzy-

matic complex were isolated in results of complex processing of sea urchin. Lipid and hydrophilic complexes were extracted from cod liver. Polyhydroxylated naphthoquinone pigments isolated from sea urchins shells were able to scavenge DPPH<sup>•</sup> with ID<sub>50</sub>=0.043–0.057 µg according to HPTLC-DPPH test. Pigments in dose of 100 µg/ml have inhibited the growing of *Candida albicans*. Peptide-amino acid complex from sea urchin was effective in the treatment of acute rhinosinusitis of rats and showed immunosuppressive properties in mice. The complex of peptides associated with phospholipids from cod liver was studied as anti-inflammatory, reparative and anti-allergic agent for veterinary praxis. Extract of coelomic fluid of sea urchin showed anti-inflammatory and anti-hyaluronidase activity. Sexual activity of rats was increased after single administration of special fraction of sea urchin and mobility and survival was increased after 8 weeks of administration. Hydrobionts are potent sources of biological active compounds with the wide specter of pharmacological activity.

## STUDY OF PHARMACOLOGICAL ACTIVITY OF *STRONGHYLOCENTROTUS DROEBACHIENSIS* EXTRACT ON THE ERECTILE FUNCTION OF YOUNG ADULT MALE WISTAR RATS

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Marine natural products have attracted the attention of biologists and chemists of the world over for the last five decades. The gonads of the sea urchins (*Stronghylocentrotus droebachiensis*) have many types of bioactive compounds and are the good source of pharmacological agents designed to correct disorders of a sexual health of men. The aim of the study was to assess the pharmacological activity of *Stronghylocen-*

*trotus droebachiensis* extract on the erectile function of young male adult Wistar rats. The *Stronghylocentrotus droebachiensis* extract was administered per os in doses 1.3, 6.4 and 12.8 mg/kg. There were used two schemes of the experiment: single administration with the reference drug Viagra (sildenafil citrate) (Pfizer, France) and multiple administration during 60 days with the reference drug of plant origin Tentex forte (Himala-