

Structural and functional variety of physiologically active agents - A molecular basis of high adaptive potential and a specific variety of a biota in the Arctic, prospects for biopharmaceutics

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The Arctic is “natural laboratory in the field of speciation” since according to the rule of a parentage of new types “... new large groups of organisms originate not from specialized representatives of ancestors, but from their rather unspecialized groups”. Another thing is that the majority of arising new ecoforms in the evolutionary process don't reach level of new types eliminates from biocenose. I.e. in northern ecosystems existence and evolution of a biota is provided not with a high interspecific biodiversity, but high adaptive potential (first of all, nonspecific) of existing types and new ecoforms. Apparently, a basis of high adaptive potential of northern organisms is the wide range of a structurally functional variety at the level of physiology-biochemical systems, the physiologically active agents (PAA), first of all, the nonspecific regulatory and protective action, being modifiers of activity both catabolic, and anabolic enzymes.

So far in our institute with application of physical and chemical biotechnologies were developed two series of the biological preparations containing as an active agents PAA complexes from tissues of plans and animals of the North. These preparations received the name “Epsorin” and “Yagel”.

The preparation “Epsorin” - effective medicine against asthenic conditions, nervosism, hypotension, possesses immunomodulating and radio protective action, increases physical and mental working capacity.

The preparation “Yagel” is a detoxicant of internal mediums of an organism, use of it by patients with diabetes mellitus of the type II increased in 1,7-1,9 times level of insulin secretion by beta cells of the pancreas.

Biography

Khlebnyy E. S completed his Ph.D. at age 24 in Institute for biological problems of permafrost; He works now as a senior staff scientist. He has more than 30 science publications.

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