

Industrial Production of Nutraceuticals from Medicinal Mushrooms in Cereals

Lidia G. Moskalenko, Natalia A. Kozilko, and Boris L. Berenstein

A. A. Bogomolets National Medical University, 22 Pushkinsaya Str., Kiev, Ukraine and Research-and-Introduction Company "Slavia," 13 B. Vasylykivska Str., Kiev, Ukraine

In the complex ecological situation in Ukraine, the continuous impact of small ionizing radiation doses gives rise to various problems pertaining to population health.

It is a paradox that in the new millenium, when new progressive technologies are being developed, in all age groups of the population (including developed countries) a deficiency of vitamins, microelements, amino acids, unsaturated fatty acids, alimentary fibers, biologically active components, and vegetable antioxidants is found.

Considering the food factor as the dominant one in the pathogenesis of diseases, new technologies for industrial production of biologically active components (BACs) are being developed in Ukraine.

The Research-and-Introduction company

"Slavia" produces about 20 compositions of natural cereal nutraceuticals enriched with such biologically active filling agents as *Lentinus edodes* (Berk.) Sing. and *Ganoderma lucidum* (Curt.: Fr.) P. Karst. Wheat germ containing 18 amino acids, 12 vitamins, and micro- and macroelements constitutes the filling matrix. Polycereal cellulose is used as a vegetable sorbent. The aforementioned cellulose is enriched with such filling agents as the mushrooms *L. edodes* and *G. lucidum*. Polysaccharides and antioxidants contained in nutraceuticals promote an increase in radioprotective activity and adaptogenic effect, as well as immune system recovery.

Researchers from the Medical University in conjunction with the "Slavia" company are developing new nutraceutical compounds on the basis of medicinal mushrooms.