

## International Conference “Higher Basidial Fungi: Individuals, Populations, and Communities”

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Received March 19, 2008

DOI: 10.1134/S0026261708060167

An international conference that summed up the recent research on basidial fungi was held on February 4–6, 2008, at the Biology Faculty of Moscow State University under the aegis of the Mycology and Algology Department.

Currently, researchers pay special attention to higher basidial fungi (BF). BF are widespread in nature and play an important, although not yet fully understood role in the functioning of biocenoses. They are the main decomposers of such difficult-to-degrade biopolymers as lignin and the cellulose of wood and leaf litter, and perform essential functions in terms of the terrestrial carbon cycle. Recently, particular attention has been given to the fungi that survive and form fruiting bodies at low temperatures (down to  $-5^{\circ}\text{C}$ ). Mycorrhiza-forming fungi enhance the supply of soil nutrients to plants, provide them with the necessary biologically active compounds, and secure communication among forest plant species.

BF are of special interest for the studies of stress reactions and regulation of the reproduction system, morphogenesis, life cycles (with emphasis on the phenomenon of senescence), cell death, and other issues of general biology.

BF are a valuable source of nutrients, such as food and feed protein. However, the data on fruiting body formation in them is still scant. Presently, only about 20 species of these fungi are produced under laboratory conditions, whereas approximately five to seven species are cultivated under industrial conditions. Collections contain only a relatively small number of BF species. Nevertheless, these fungi are gaining importance in pharmacology, medicine, and dietetics, and this trend is quite stable. The fungal aminopolysaccharides chitin and chitosan, the chitin–glucan complex, anticancer

and antisclerosis compounds, hepatoprotectors, and antibiotics hold special value.

The above issues facing mycologists were considered in the presentation by Prof. Yu.T. D'yakov and discussed in detail during the conference. Of special interest were the presentations concerning the ecomorphology of basidial fungi (M.A. Bondartseva), the pathways of the morphogenesis of corticioid fungi (I.V. Zmitrovich), the formation of fruiting bodies in higher basidial fungi (L.V. Garibova), the cytosol protective carbohydrates of basidiomycetes (E.P. Feofilova), selected aspects of hymenomycete cytology (O.V. Kamzolkina), the contribution of collections of higher basidial fungi to the development of biotechnology (S.M. Ozerskaya, G.A. Kochkina, and N.E. Ivanushkina), the antibiotics of basidial fungi (O.V. Efremenkova, O.V. Tikhonova, and G.S. Katrukha), their antitumor properties (L.M. Krasnopol'skaya, A.V. Avtonomova, I. V., Belitskii et al.), and other subjects. About 50 mycologists that represented 22 institutions in 17 cities of Russia and Ukraine participated in the conference; 24 talks and 18 posters were presented. The conference proceedings were published and contained 46 articles by prominent mycologists.

The conference date fell on the 100th anniversary since the birth of Prof. M.V. Gorlenko, a Corresponding Member of the Russian Academy of Sciences, who was the Head of the Mycology and Algology Department from 1955 to 1994. This scientist made a significant contribution to the development of Russian mycology and founded a major scientific school. He was well known for his friendly and supportive attitude to his colleagues. His memory lives on and is still cherished by a large number of people, particularly his long-term collaborators.

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