

The Hormones of Fungi

Ludmila I. Musatenko

N. G. Kholodny Institute of Botany, National Academy of Sciences of Ukraine, Tereshchenkivska Str. 2, Kiev 01601, Ukraine

It is known that fungi are used as producers of valuable biologically active compounds, as well as in the medical industry to obtain antibiotics, enzymes, lipids, and various drugs. This report generalizes information concerning studies on peculiarities and formation of plant growth regulators in fungi. Fungi of more than 100 species belonging to various taxonomic groups are able to produce all main types of phytohormones. In recent years, data regarding these physiologically active metabolites of fungi have been accumulated, but a basic concept of fundamental investigation of mechanisms of phytohormone formation by fungi have been studied insufficiently.

The data available in literature on studies of plant growth regulators in different groups of fungi are summarized. The results of experimental investigations of phytohormones (indole acetic acid, abscisic acid, gibberellin-like substances, and cytokinins) in some species of Basidiomycetes are presented. Currently, the urgent problem is theoretical substantiation and experimental proof of the possibility of using mushroom industry wastes as organic fertilizers and plant growth substances in agriculture, as well as for the obtaining of substances and complex preparations possessing biostimulating or inhibiting actions.