Thematic Section: Biochemical Researches. **Full Paper**
Subsection: Bioorganic Chemistry. *Registration Code of Publication:* 11-28-20-53
Publication is available for discussion in the framework of the on-line Internet conference "*Butlerov readings*".
http://butlerov.com/readings/
Contributed: November 1, 2011.

General chemical characterization of polysaccharides and polysaccharide-protein complexes of the fungus *Aspergillus niger* cell wall

© **Anatoly A. Shubakov**,*+ and **Elena A. Mikhailova**
Department of Molecular Immunology and Biotechnology. Institution of Russian Academy of Sciences, Institute of Physiology, Komi Science Centre, The Urals Branch of Russian Academy of Sciences. Pervomayskaya St., 50. Syktyvkar, 167982. Komi Republic. Russia.
Phone: +7 (8212) 24-10-01. E-mail: shubakov@physiol.komisc.ru

*Supervising author; +Corresponding author

***Keywords*:** *polysaccharides, polysaccharide-protein complexes, cell wall, sugar composition, filamentous fungi, Aspergillus niger*.

Abstract

The general chemical characteristic of cell wall water- and alkali-soluble polysaccharides of filamentous fungus *Aspergillus niger* is presented. Among extracellular polysaccharide-protein complexes of the fungus *Aspergillus niger*, substances with molecular weight less than 50 κDa dominate. In a cell wall of fungus, polysaccharide-protein complexes with higher molecular weight – more than 300 and 100-300 κDa prevail. Prevailing neutral monosaccharides in different proportions are glucose, mannose and galactose. The maximum quantities of protein and glycuronic acids in polysaccharide-protein complexes are determined in fractions with molecular weight more than 300 κDa.