

# Copper Accumulation and Phosphatase Activities of *Aspergillus* and *Rhizopus*

Kolishka Tsekova<sup>a</sup>, Danka Galabova<sup>b,\*</sup> and Kristina Todorova<sup>a</sup>

<sup>a</sup> Laboratory of Microbial Ecology, Institute of Microbiology, Bulgarian Academy of Sciences, Ak. G. Bonchev str, bl 26, 1113 Sofia

<sup>b</sup> Department of Microbial Biochemistry, Institute of Microbiology, Bulgarian Academy of Sciences, Ak. G. Bonchev str, bl 26, 1113 Sofia.

Fax: +359 2 700 109. E-mail: dgal@microbio.bas.bg; dgal@bas.bg

\* Author for correspondence and reprint requests

Z. Naturforsch. **55c**, 708–712 (2000); received February 8/June 13, 2000

*Aspergillus*, *Rhizopus*, Copper Uptake, Phosphatase Activity

Copper accumulation and phosphatase activities of three *Aspergillus* species resistant to copper were compared to three copper-sensitive *Rhizopus* species. High level of acid phosphatases and decreased Cu<sup>2+</sup>-uptake were found with resistant in contrast to sensitive strains. The presence of copper(II) ions in the medium increased the production of acid phosphatases in the resistant *A. niger* and decreased their activity in the sensitive *R. delemar*. Copper ions inhibited the activity of *A. niger* cellular acid phosphatase with a K<sub>i</sub> of 8.9x10<sup>-4</sup> M and slightly activated the *R. delemar* enzyme.