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Effects of Sucrose Concentration during Citric Acid Accumulation by *Aspergillus niger*

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Abstract: A number of regulatory mechanisms are involved in increasing citric acid production under certain conditions. The accumulation of citric acid takes place under the high concentration of carbon sources. The effect of sucrose as a carbon source on the accumulation of citric acid and tyrosine phosphorylated proteins during high glycolytic conditions was investigated using *Aspergillus niger* ATCC 11414. When mycelia are treated by different sucrose concentrations, a protein of ~ 27 kDa becomes tyrosine phosphorylated. This tyrosine phosphorylation takes place in response to signal transduction from the extracellular milieu. A possible role of this ~ 27 kDa protein in signal transduction was demonstrated in the strain *A. niger* ATCC 11414 during cultivation on different concentrations of sucrose.

Key Words: *Aspergillus niger*, citric acid accumulation, osmotic stress, phosphotyrosine, signal transduction

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