

**CARBONYL CYANIDE M-CHLOROPHENYLHYDRAZONE INDUCED-  
ACTIVATION OF PLASMA MEMBRANE ATPASE FROM *SACCHAROMYCES  
CEREVISIAE*.**

França, M.M.<sup>1</sup>, Cardoso, A. S.<sup>1</sup>; Trópia, M. J. M.<sup>1</sup>; Fietto, L.G.<sup>2</sup>; Castro, I. M.<sup>1</sup> and Brandão, R. L.<sup>1</sup>

<sup>1</sup>Laboratório de Biologia Celular e Molecular, NUPEB, UFOP, MG – Brazil.

<sup>2</sup>Departamento de Bioquímica, UFV, MG – Brazil

The plasma membrane H<sup>+</sup>-ATPase of *Saccharomyces cerevisiae* is a very important enzyme, regulated at post-translational level by two main factors: sugars and acid pH. Furthermore, by pumping protons out of the cell, it contributes for the control of the intracellular pH and it also creates an electrochemical gradient that is essential for nutrient uptake. In this work, we show that depolarizing compounds, like carbonyl cyanide m-chlorophenylhydrazone (CCCP) and 2,4-dinitrophenol (DNP) also triggers a very clear activation of the enzyme. Our results also suggest that the CCCP induced-activation of the H<sup>+</sup>-ATPase shares some similarities with the sugar-induced of the enzyme. In this sense, we demonstrated that the phospholipase C and protein kinase C activities are essential for this activation process; however, the protein G, Gpa2p, in opposition to the sugar-induced activation of the enzyme is not required. On the other hand, the glucose sensor Snf3 p, and the calcium ATPase present in the membrane of the vacuole - Pmc1 p, seems to be involved with the control of the availability of calcium in the cytosol and in the activation of a H<sup>+</sup>-ATPase confirming that the post-translational activation process of this enzyme is calcium-dependent.

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