

Aluminium toxicity and signal transduction in cell suspensions of *Coffea arabica*

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Aluminium (Al) is the most abundant metal on Earth's crust (7% of the all elements). Toxicity due to this metal is widely documented in tropical acid mineral soils and is the major factor limiting over the productivity of crop species. Coffee is one of the most important crops economically worldwide. This crop grows on acid soils where the availability of Al is greater. Therefore, coffee yield is limited by the toxic effects of this element. We have developed a biological model in which suspension cells of *Coffea arabica* have been used. We found that aluminium toxicity affect the activity of different enzymes involved in the metabolism of phosphoinositides and other members of the signal transduction pathway associated to them. We also are looking for the effect of salicylic acid and the mechanism of protection in aluminium toxicity on this signal transduction mechanism. An overview of the latest results will be presented.

Biography

Teresa Hernández Sotomayor completed her Under-graduation, Master's and Doctorate studies at the National Autonomous University of Mexico (UNAM). She joined the Scientific Research Centre of Yucatán (CICY) in July 1993. Her research has focused on "The study of the mechanisms of signal transduction in plant cells". She has written over 80 international articles. Her work has been cited by authors over 1,500 times. Her current research work is on "The study of the basic mechanisms of signal transduction which is fundamental to solve problems such as for many pests and diseases that limit the performance of important cultivars such as rice, sorghum and wheat".

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