



## **Protein expression pattern of the saltbush (*Atriplex nummularia*) in response to high salt concentration**

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The aim of this study was to analyze the protein expression profile in NaCl treated tissues of *A. nummularia*. Firstly, the plants were cultivated in a green house in pots containing sand and irrigated each two days with 0, 150, 300, 600 mM NaCl during 45 days. In another experiment the plantlets were cultivated under hydroponics conditions in Hoagland solution and the NaCl treatment (300 mM) was applied in the water medium during 6 days. At the same experiment, a piece of the plants was recovered in a Hoagland medium without NaCl for 6 more days. In order to better characterize the leaf, stem and root tissue protein, a cellular fractionate was done. Two main fractions were obtained, a soluble (cytosol enriched) and an insoluble (containing organelles and membranes). The result of the protein expression pattern revealed by SDS-PAGE and 2-D electrophoresis showed some NaCl induced peptides in green stems (16, 24 and 26 KDa), beyond the others peptides bands increase. On the other hand, in leaf tissues, the NaCl induced a decrease in many protein bands intensity. The soluble and insoluble fractions analysis showed similar results with those in total soluble proteins. The most significant differences were found in green stems both in soluble and insoluble fraction. Under hydroponics conditions the stems do not show a remarkable increase in those low molecular mass bands as observed in the other experiment under natural conditions. It was possible speculate that the expression of these proteins could be related with the transpiration intensity or the plant age or others factors present in the growth medium.

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