

V-ATPASE SUBUNIT E GENE EXPRESSION FROM *Vigna unguiculata* (L.)  
WALP IN RESPONSE TO ABIOTIC STRESS.

Sobreira, A.C.M<sup>1</sup>, Oliveira L.M.N<sup>1</sup>, Costa J.H<sup>1</sup>, Sousa F.Y.M<sup>1</sup>, Rebouças D.M<sup>1</sup>,  
Cavalcanti J.H.F<sup>1</sup> and Fernandes de Melo D<sup>1</sup>.

<sup>1</sup>Departamento de Bioquímica e Biologia Molecular – Universidade Federal do  
Ceará – Fortaleza, Brasil

The V-ATPase of higher plants establishes and maintains an electrochemical proton-gradient across tonoplast that provides energy for the secondary transport of ions and metabolites. The role of subunit E, one of 12 different subunits V-ATPase, is not well known. In plant, transcriptional regulation of V-ATPase subunits is an important mechanism to adjust V-ATPase activity. The aim of this work was to evaluate the expression on the transcript levels of V-ATPase subunit E (*VHA-E*) from *Vigna unguiculata* (L.) Walp cv. Vita 5 leaves under salt, osmotic and oxidative stresses. The seeds of *V. unguiculata* were germinated in water and after 3 days the seedlings were transferred to Hoagland's medium and grown in the absence (control), presence of 0.1 M NaCl, 200.67 g/L PEG or 1 mM H<sub>2</sub>O<sub>2</sub> during 4 days at green house. The transcript level *VHA-E* from leaves was evaluated by RT-PCR using primers designed from conserved regions of cDNA *VHA-E* from different plant species. Our data showed the presence of three copies of *VHA-E* gene, varying slightly in molecular length, which were expressed in all conditions revealing up regulation under stress. One of them was strongly induced in stress conditions. These results suggest that subunit E participates in V-ATPase regulation facing abiotic stresses.