

EXPRESSION OF THE VACUOLAR PROTON PUMPS FROM *Vigna unguiculata* (L.) WALP LEAVES UNDER ABIOTIC STRESS.

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It is known that V-ATPase and V-PPase play essential roles in plant responses to environmental changes. The electrochemical gradient promoted by these enzymes is the driving force for the accumulation of ions and other solutes in the vacuole being important to maintain cytosolic ion homeostasis and cellular metabolism. The aim of this work was to evaluate the transcript levels of V-ATPase subunit A and V-PPase 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 H₂O₂ during 4 days at green house. Total RNA was isolated from leaves. The mRNA was indirectly quantified by the cDNA obtained through RT-PCR using specific primers. The proton pumps transcript analysis showed a differential profile. V-ATPase subunit A presented higher transcript levels in all stress conditions and V-PPase had no difference or even decreased when compared to respective control conditions. These results indicate that V-ATPase might be regarded as a molecular marker facing these abiotic stresses.

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