

Quantification and Fatty Acid Profiles of Sulfolipids in Two Halophytes and a Glycophyte Grown under Different Salt Concentrations

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This study was aimed at understanding the role of sulfolipids in salt tolerance mechanisms of the halophytes *Aster tripolium* L., Compositae, and *Sesuvium portulacastrum* L., Aizoaceae, and of the glycophyte *Arabidopsis thaliana* (L.) Heynh., Brassicaceae. In *Aster* and *Sesuvium* the sulfolipid contents increased significantly under salt stress conditions (517 mM or 864 mM). In *Arabidopsis*, changes in sulfolipid contents were not observed (NaCl up to 100 mM). The fatty acid profile of sulfoquinovosyldiacylglycerol (SQDG) in *Aster* was modified with increasing NaCl concentrations. LC-MS analyses of sulfolipids from *Aster* and *Sesuvium* revealed the presence of 18:3/18:3 and 16:0/18:3 molecules. Obviously, the function of sulfolipids during salt stress differs between halophytic species and between halophytes and glycophytes where sulfolipid accumulation was not observed.

Key words: Fatty Acids, Salt Tolerance, Sulfolipids