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Title: Cellular mechanisms to survive salt in the obligate halophyte *Cakile maritima*

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Cellular mechanisms to survive salt in the obligate halophyte *Cakile maritima***Running title:** Na⁺-exclusion in *C. maritima*Delphine Arbelet-Bonnin¹, Ibtissem Ben Hamed-Laouti^{1,2}, Patrick Laurenti¹, Chedly Abdelly², Karim Ben Hamed², François Bouteau^{1,§}¹ Université Paris Diderot, Sorbonne Paris Cité, Laboratoire Interdisciplinaire des Energies de Demain, Paris, France² Laboratoire des Plantes Extrêmophiles, Centre de Biotechnologie de Borj Cedria, University of Carthage-Tunis, BP 901, 2050 Hammam Lif, Tunisia**§Corresponding author:** François Bouteau, Université Paris Diderot-Paris 7, LIED, case courrier 7040 Lamarck, 75205 Paris CEDEX 13, France. E-mail: francois.bouteau@univ-paris-diderot.fr

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Highlights

- *Cakile maritima* is a putative crop and model of obligate halophyte
- Two pathways could be induced by salt stress in *C. maritima* cultured cells
- A first one dependent on superoxide generation and NSCC activation leads to PCD
- A second one dependent on early singlet oxygen generation and Ca²⁺ influx allows the activation of H⁺-ATPases and a SOS-like system allowing cell repolarization, exclusion of Na⁺ and survival

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