

Scientists identify the signals plants use to survive in salty soils

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Plants survive in high-salt soils through a signaling pathway using salt-responsive calmodulin proteins, which trigger cells to change their internal ion balance. A group led by Liqun Zhao of Hebei Normal University in Shijiazhuang, China, report the findings in a study published September 29, 2016 in *PLOS Genetics*.

The study provides a novel explanation for how plant cells signal and react to salt stress and may have implications for breeding crop varieties that are more resistant to saline soils.

Their findings also suggest that this plant defensive pathway could share a common evolutionary origin with animals. In [mammalian cells](#), calmodulin signaling regulates the production of nitric oxide for multiple functions, including the transmission of impulses between neurons, blood vessel dilation and immune responses.

More information: Zhou S, Jia L, Chu H, Wu D, Peng X, Liu X, et al. (2016) Arabidopsis CaM1 and CaM4 Promote Nitric Oxide Production and Salt Resistance by Inhibiting S-Nitrosoglutathione Reductase via Direct Binding. *PLoS Genet* 12(9): e1006255. [DOI: 10.1371/journal.pgen.1006255](#)

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