

Study may lead to drought-resistant plants

April 3 2007

U.S. scientists have determined how plants pass signals of stress due to lack of water or salinity from chloroplast to nuclei.

University of Nevada-Reno Associate Professor Ron Mittler and research associate Shai Koussevitzky found multiple distress signals in plants converge on a single pathway, which channels the information to the nucleus.

Mittler, an associate biochemistry and molecular biology professor, and Koussevitzky found chloroplasts -- the cellular organelles that give plants their green color -- have at least three different signals that can indicate a plant is under stress.

Given the challenges the environment will face during coming decades through global warming, the researchers said their findings might lead to new generations of plants that are more drought- and stress-tolerant.

The study -- part of a collaborative effort led by Professor Joanne Chory of the Salk Institute for Biological Studies -- appears in journal Science.

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Citation: Study may lead to drought-resistant plants (2007, April 3) retrieved 2 May 2024 from <u>https://phys.org/news/2007-04-drought-resistant.html</u>



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