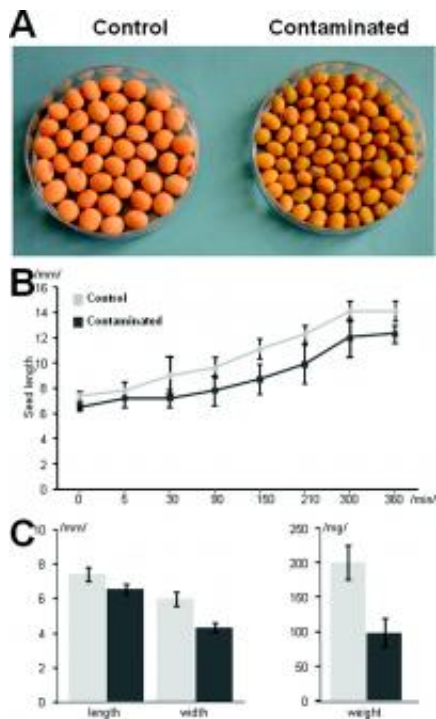


Solving the mystery of how plants survive near Chernobyl

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Scientists are reporting development of “self-propelled” oil droplets that run on chemical “fuel.” The development could serve as a blueprint for designing similar locomotion systems in artificial cells. Credit: The American Chemical Society

Twenty-two years after the Chernobyl nuclear power station accident in the Ukraine — the worst in history — scientists are reporting insights into the mystery of how plants have managed to adapt and survive in the radioactive soil near Chernobyl. Their research is the first to probe how

production of key proteins in plants changes in response to the radioactive environment, according to the report. It is scheduled for the June 5 issue of *ACS' Journal of Proteome Research*.

Martin Hajduch and colleagues note in the new study that [plants](#) growing in the Chernobyl area following the April 26, 1986 disaster somehow adapted to the radioactive environment and thrived. But until now, nobody knew what biochemical changes in the plants accounted for this miracle and enabled plants to adapt.

The researchers found that soybean plant seeds exposed to radiation produced different amounts and types of [protein](#) than seeds from unexposed plants. The proteins protected the seeds from radio-contaminated environment. Interestingly, plants from contaminated fields produced one-third more of a protective protein called betaine aldehyde dehydrogenase — the same protein known to protect human blood from radiation damage.

More information: [Journal of Proteome Research](#), “Proteomic Analysis of Mature Soybean Seeds from the Chernobyl Area Suggest Plant Adaptation to the Contaminated Environment”

Provided by American Chemical Society ([news](#) : [web](#))

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