CRISPR-edited crops reveal gene responsible for salt tolerance in rice

Scientists from China National Rice Research Institute reported that *FLN2*, a gene that encodes fructokinase-like protein2, influences sugar metabolism as well as rice plant's response to salinity stress. The results of their study are published in *Biomolecules*.

Several mutagenized rice lines were grown under high salinity conditions to pinpoint the genes needed for the expression of salinity tolerance. Some rice lines with mutation in *FLN2* showed susceptibility to salinity stress. Wild-type rice lines exposed to salinity stress showed up-regulated *FLN2*, while CRISPR-Cas9-generated lines with dysfunctional *FLN2* exhibited hypersensitivity to salinity stress. Furthermore, sugar metabolism was reduced in the knockout line than in wild-type plants. This may imply that the compromised salinity tolerance in *FLN2* knockout plants was caused by the shortage in assimilate needed for growth.

The researchers concluded that *FLN2* is vital in seedling growth as well as in tolerance to salinity stress.

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