

Newly identified rice gene could help develop drought-tolerant biotech crop varieties

[Drought](#) is one of the abiotic factors that affect the yield of crops. Studies have shown that basic leucine zipper motif (bZIP) transcription factors play an important regulatory function in plant drought stress responses. However, the functions of bZIP transcription factors in [rice](#) are still mysterious. Scientists from Shanghai Agrobiological Gene Center [identified and characterized](#) a novel drought stress-related bZIP transcription factor in rice—*OsbZIP62*. The findings are published in *BMC Plant Biology*.

Results showed that the expression of *OsbZIP62* was induced by drought, hydrogen peroxide, and abscisic acid (ABA). Overexpression of *OsbZIP62-VP64* (*OsbZIP62V*) led to improved tolerance to drought and oxidative stress exhibited by transgenic rice Furthermore, analysis showed that the expression of several stress-related genes was upregulated in *OsbZIP62V* plants.

The findings imply that *OsbZIP62* is important in ABA signaling pathways and positively regulates rice drought tolerance by controlling the expression of stress-related genes, and this gene could be used to [genetically engineer](#) important crops with better drought tolerance.

Read full, original article: [Crop Biotech Update, June 20, 2019](#)