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Genome editing in wheat, polyploid and complex genome

Hikmet Budak

Montana State University, USA

Genome editing technology is relatively easy to use and more cost-effective than others. By combining versatile tools to study and modify plants at different molecular levels, the CRISPR/Cas9 system is paving the way toward a new horizon for basic research and crop development. Wheat (*Triticum aestivum* L.) is a stable crop providing more than 20% of daily calories intake for humans and has a complex genome formed with the combination of three different genomes: A, B, and D. The hexaploid wheat genome makes this plant an important model for studying and optimizing the genome editing system. In our study, we applied the CRISPR/Cas9 genome editing system for abiotic stress response genes and small RNA genes. The CRISPR/Cas9 genome editing system in wheat was effectively established using different proteins as well.

Biography

Hikmet Budak currently works at the Department of Plant Sciences and Plant Pathology, Montana State University. Hikmet does research in Molecular Biology, Genetics and Agricultural Plant Science.

hikmet.budak@montana.edu

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