

Special Issue

Applications of Transgenic and Targeted Genome Editing in Rice Improvement

Message from the Guest Editors

Rapid climate change and associated abiotic and biotic stresses have heavily impacted rice production globally. Present rice research is mainly focused on the development of climate resilient, high yielding, and nutritionally superior varieties of popular rice varieties which will not only adapt to lesser water requirements, low fertilizer input, and other abiotic and biotic stresses, but will also yield more per unit land to meet the future food demand of humanity. Scientific advances in targeted genome editing and transgenic technology offer expanded potential to dissect gene function and also re-engineer and design future rice varieties. Novel gene editing systems have emerged as a powerful tool to target one gene or gene-families and modify plant genomes in several ways to address various bottlenecks associated with rice production and productivity. This Special Issue offers a platform to publish high quality reviews, opinions, and research articles on the genetic improvement of rice through applications of transgenic and targeted genome editing approaches in the context of improving of grain yield, disease resistance, stress tolerance, and the nutritional quality of rice.

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