Special Issue

Molecular Mechanism of Quality Formation in Rice

Message from the Guest Editors

Rice grain quality, including milling quality (MQ), appearance quality (AQ), eating and cooking quality (ECQ), nutritional quality (NQ) and safe quality, is critical for determining economic value in the marketplace and improving consumer satisfaction. A combination of classical map-based cloning, Genome-Wide Association Studies (GWAS) and multi-omics methods should be used to identify more genes involved in rice grain quality. In addition, gene editing has also been shown to improve rice quality. In this Special Issue, we are focusing on understanding to a greater degree the molecular mechanism of quality formation in rice:

- GWAS and quantitative trait loci (QTL) analysis for rice grain quality using natural rice resources and genetic populations;
- Identification of genes affecting rice grain quality, including storage substance synthesis and transport through forward and reverse genetics;
- The application of gene editing in breeding high-quality rice;
- New tools used to explore genes or understand the molecular mechanism of quality formation;
- Super allele identification and utilization in grain quality breeding.

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