

## Special Issue

# 5Gs in Crop Genetic and Genomic Improvement

### Message from the Guest Editor

Global warming will lead to extreme weather, including floods, droughts, cold damage, high temperature and other disasters. Crop yields and quality will suffer greatly from these extreme weather events. In facing these threats, traditional breeding systems cannot create sufficient crop improvement to meet demands. So far, genetic and genomic research have entered 5G stages (1G: genome sequencing and assembly; 2G: germplasm characterized at genomic and agronomic levels; 3G: gene function analysis; 4G: genomic breeding strategies; 5G: gene editing technology). The recent advances in 5G, including crop sequencing, phenomics and multiple omics analysis, have greatly promoted crop breeding. This Special Issue focuses on the 5G in crop genetic and genomic improvement including but not limited to crop gene functional analysis, crop proteome and metabolism research, crop GWAS analysis and epigenetics regulation in crop breeding. We welcome the submission of reviews and research articles. We especially encourage the submission of original papers that use gene editing technology for crop breeding.

### Guest Editor

Dr. Xinjie Shen

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### Deadline for manuscript submissions

closed (25 December 2023)

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## Genes

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### Message from the Editor-in-Chief

*Genes* is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised. Why not consider *Genes* for your next genetics paper?

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### Editor-in-Chief

Prof. Dr. Selvarangan Ponnazhagan  
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