Special Issue

Genetic and Molecular Basis of Crop Resistance to Pathogens

Message from the Guest Editor

Diverse and rapidly evolving pathogens cause plant diseases that threaten crop yield and food security around the world. Genetic plant protection is a convenient alternative to chemical control of diseases. It is based on using plant resistance genes to develop disease-resistant cultivars. Adaptation processes in pathogen populations lead to loss of efficiency of resistance genes, so it is necessary to involve new genes in breeding. In this regard, it is necessary to study genetic resources of resistance and develop a stock of genes with both qualitative and quantitative resistance to ensure breeding. The emergence of new genomic technologies, complete sequencing of genomes of different crops, cloning of resistance genes, and recent advances in genetics of host–pathogen interaction have contributed to the significant acceleration and improvement in research on the problem of the genetic and molecular basis of crop resistance to pathogens. This Special Issue deals with all aspects of genetic of plant resistance to fungal, viral, bacterial and viroid diseases, and the molecular basis of host–pathogen interaction.

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