

Special Issue

Functional Genomics and Computational Biology of Horticultural Plants

Message from the Guest Editor

Horticultural species are vital for global agribusiness and contribute to a sustainable, healthy diet. However, climate change, population growth, and susceptibility to stresses threaten their productivity. To address these challenges, sustainable and resilient horticultural varieties with high nutritional value are needed. Functional genomics and computational biology in horticultural plants explore gene functions and interactions through techniques like transcriptomics, proteomics, and metabolomics. These methods, along with computational tools, help uncover plant traits, stress responses, and biological mechanisms, advancing crop breeding for climate resilience. Integrating functional genomics with multi-omics data will aid in identifying key traits for crop selection, enhancing productivity. The scope includes gene regulation, genetic improvement, genome editing (e.g., CRISPR/Cas9), stress responses, RNA silencing, and computational models for simulating plant growth and predicting traits like yield and stress tolerance. We cordially invite submissions of research in the field of 'Functional Genomics and Computational Biology in Horticultural Plants'.

Guest Editor

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