Special Issue

Genomics of Growth Traits and Stress Acclimation in Forest Trees

Message from the Guest Editors

The forest ecology and sustainable utilization of timber sources are crucial owing to the concomitant influence of a variety of stress cues. Molecular patterns of genetic resilience and resistance in correlation with favorable environments and nutrients are postulated to collectively impact survival and evolution in forest-tree species. Tree growth, stress adaptation, and defense priming are mounted concurrently with a profound deployment of genomic traits and metabolic and signaling genes underlying the transcriptional/translational mechanisms. Recent technique innovation in functional genomics, genetics, and omics accelerates optimizing growth performance and alternative strategies for stresses and quality/biomass-related traits in forest trees. Specific QTL/gene identification and experimental evaluation for major genomic traits make the molecular breeding and development of stress-resilient and high-biomass energy trees incredibly important. Thus, an in-depth perception and unveiling of cellular and metabolic processes in trees are expected to pave the way toward novel strategies based on the reorientation of growth traits and stress acclimation.

Guest Editors

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