

Special Issue

Molecular Insights into Fruit Ripening and Senescence

Message from the Guest Editors

Fruit ripening is the sophisticated interplay of physiological and biochemical transformations. These ripening processes and subsequent senescence events are governed by intricate molecular networks involving the coordinated actions of ripening-related genes, transcriptional regulators, enzymatic systems, signaling cascades, and metabolic reprogramming that ultimately dictate both fruit quality and postharvest deterioration patterns. Determining the molecular mechanisms underlying fruit ripening and senescence has substantial agricultural and economic significance. Over the past decade, research has yielded significant insights through multidimensional investigations spanning physiology, phytohormone, structural/functional genes, transcription factors, and epigenetic modifications. Despite these advancements, fundamental questions persist regarding the precise molecular initiators and comprehensive regulatory network controlling these biological processes. This Special Issue will collate cutting-edge research advancing our understanding of molecular regulation in fruit ripening and senescence.

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Horticultural plants and their products provide sustenance, health, and beauty. A confluence of factors is putting increasing pressure on horticultural production to evolve, and innovative research is addressing these challenges. *Horticulturae* provides a venue to communicate research results in a rapid manner with open access, allowing everyone the opportunity to stay abreast of leading research addressing horticulture. I invite you to consider publishing the results of your research in this high quality, peer-reviewed journal.

Editor-in-Chief

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