

## Special Issue

# A New Perspective on Fruit Quality: From Molecular Regulatory Mechanisms to Nutritional Value

### Message from the Guest Editor

Fruit quality includes color, texture, and flavor, which drive consumer preference and market value. Fruits also contain bioactive compounds (e.g., anthocyanins, carotenoids, polyphenols) that provide health benefits such as antioxidant, anti-inflammatory, and metabolic regulation. This Special Issue focuses on the molecular mechanisms underlying fruit quality traits—from the biosynthesis of pigments, cell wall metabolites, sugars, acids, and volatiles to their integration into regulatory networks involving transcription factors, phytohormones, and epigenetic modifications. We especially welcome studies that link fruit quality to human nutrition, including the identification of health-promoting bioactives, their bioavailability, and the genetic or environmental factors controlling their accumulation. Cutting-edge approaches such as multi-omics, CRISPR/Cas9 gene editing, and network pharmacology are encouraged. By connecting molecular regulation to nutritional outcomes, this Special Issue aims to guide breeding and biotechnological strategies to improve both sensory attributes and health-promoting potential, ultimately contributing to healthier diets.

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### Guest Editor

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### Deadline for manuscript submissions

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## International Journal of Molecular Sciences

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