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Plant Lipid Synthesis and Metabolism

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Message from the Guest Editor

Plant lipids are the basis of most of the food and the source of atmospheric oxygen necessary for most life forms and have significant functions in plant metabolism. First, glycerolipids are structural components of cellular membranes. While phospholipids are the main components of extraplasmic membranes, chloroplast membranes are primarily composed of galactolipids. The content of lipids and fatty acids in chloroplast thylakoid membranes is unique to this organelle, indicating a major role in chloroplast biogenesis and photosynthetic performance. Plant membrane lipids have developed mechanisms in response to environmental cues. Second, many plant lipids or their derivatives are precursors to signaling molecules, which not only mediate plant growth and development but are also involved in plant stress response. Third, acyl lipids are important storage compounds to fuel seed germination and seedling growth. Thus, the significance of plant lipids hardly needs to be emphasized.

This Issue welcomes contributions about the molecular mechanism regulating plant lipids biosynthesis and metabolism to improve crop yields and vegetable oil production and quality.



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Special Issue



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Message from the Editor-in-Chief

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