



Jasmonates: Understanding of Biosynthesis, Metabolism and Action

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Message from the Guest Editors

Lipid-derived jasmonates (JAs) have been recognized as crucial players in plant stress response and their immunity against biotic/abiotic environmental factors. The formation of a central compound—jasmonic acid (JA)—starts with oxygenation of chloroplast membranes lipids and leads to the synthesis of 12-oxo-phytodienoic acid (OPDA), a direct precursor of JA. Apart from the chloroplasts, multistage JAs biosynthesis and metabolism reactions also take place in the peroxisomes and the cytosol, and involve numerous genes, enzymes, transcription factors, repressor proteins, and target genes, making the process a very complex one. Consequently, inactive, partially active, and fully active compounds are formed. The identification of *CORONATINE INSENSITIVE 1* contributed to the classification of JA-Ile as a bioactive molecule. Therefore, it is not excluded that although the receptors of these compounds have not been already identified, they can play a signaling role, similarly to JA-Ile. Interestingly, JAs exhibit anti-cancerogenic activity and inhibit the growth of human cancer cells, which is a particularly intriguing research topic for interdisciplinary studies.





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Message from the Editor-in-Chief

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