Special Issue

Jasmonates: Understanding of Biosynthesis, Metabolism and Action

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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Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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