

Topical Collection

Phytoalexins: Fundamental Aspects and Applications

Message from the Collection Editors

Phytoalexins are low molecular weight antimicrobial compounds that are produced by plants as a response to biotic and abiotic stresses. In addition to displaying antifungal activity in numerous plant-pathogen interactions, phytoalexins have been implicated in human health and disease as antioxidant, anticancer and cardioprotective agents, as well as being supposed to act positively in neurodegenerative illnesses. Phytoalexins display an enormous diversity belonging to various chemical families such as isoflavones, isoflavanones, pterocarpans, isoflavans, flavanones, coumestans, furanoacetylenes, phenylpropanoids, steroid glycoalkaloids, norsesquiterpenoids/sesquiterpenoids, coumarins. Origin or review papers dealing with all aspects of phytoalexins, including structure elucidation; chemical synthesis; methods for phytoalexin analysis in plant extracts or biological fluids; biosynthesis studies including modulation of phytoalexin synthesis; engineering of phytoalexin biochemical pathways in plants and microbes; biological roles in health and disease; structure/activity relationships, etc., are welcome for inclusion in this Topical Collection of *Molecules*.

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As the premier open access journal dedicated to molecular chemistry, now in its 30th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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