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.

Collection Editors

Prof. Dr. Philippe Jeandet

Research Unit "Induced Resistance and Plant Bioprotection", RIBP-USC INRAe 1488, University of Reims Champagne-Ardenne, 51100 Reims, France

Prof. Dr. Christophe Clément

Research Unit Induced Resistance and Plant Bioprotection, SFR Condorcet FR CNRS 3417, Faculty of Sciences, University of Reims, PO Box. 1039, CEDEX 02, 51687 Reims, France

Molecules

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed

mdpi.com/si/14462

Molecules
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
molecules@mdpi.com

mdpi.com/journal/molecules

Molecules

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed

mdpi.com/journal/molecules

MDPI

About the Journal

Message from the Editor-in-Chief

As the premier open access journal dedicated to experimental organic chemistry, and now in its 25th 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 multidisciplinary topics bridging biochemistry, biophysics and materials science, as well as timely reviews and topical issues on cutting edge fields in all these areas.

Editor-in-Chief

Prof. Dr. Thomas J. Schmidt
Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Corrensstrasse 48, D-48149 Münster, Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Reaxys, CaPlus / SciFinder, MarinLit, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.1 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).