

Special Issue

Bioactive Compounds and Advanced Analytical Approaches in Plant-Based Research: From Chemistry to Therapeutics

Message from the Guest Editors

Plant-derived compounds like flavonoids, alkaloids, and terpenoids offer significant health benefits, including anti-inflammatory, antioxidant, and antimicrobial effects. Advanced analytical techniques such as HPLC/UPLC, MS, and NMR spectroscopy are crucial for identifying and quantifying these bioactive molecules. Researchers can analyze plant extracts through traditional isolation or modern methods like dereplication and metabolomics, accelerating the understanding of their therapeutic potential. Computational tools, including cheminformatics and systems biology, further enhance the study of plant metabolism and mechanisms of action. This integrative approach validates traditional knowledge while driving phytochemical-based drug discovery. As research deepens the link between plant chemistry and human health, new therapeutic applications continue to emerge, benefiting public health and the pharmaceutical industry.

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Message from the Editor-in-Chief

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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