

## Special Issue

# Biological Activities of Plant Extracts, Secondary Metabolites, and Semi-Synthetic Derivatives

### Message from the Guest Editors

Plant extracts, secondary metabolites and semi-synthetic derivatives have gained significant attention due to their diverse biological activities and potential therapeutic applications. Plant extracts, rich in bioactive compounds, have long been utilized in traditional medicine and continue to be a source of novel drug leads. Secondary metabolites play crucial roles in plant defense and have been shown to exhibit antimicrobial, anticancer and antioxidant properties. Semi-synthetic derivatives, which are modified versions of natural plant compounds, offer enhanced bioavailability, potency, and selectivity compared to their parent compounds. The process of semi-synthesis involves altering the chemical structure of natural metabolites to improve their pharmacological profiles, making them more effective in treating various diseases. The biological activities of these compounds are largely attributed to their ability to interact with specific molecular targets. Recent advances in phytochemistry and biotechnology have led to a deeper understanding of the mechanisms behind these activities, paving the way for the development of novel therapeutic agents derived from plant-based sources.

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## Plants

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### Editor-in-Chief

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