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Antioxidant and Anti-inflammatory Activities of Plant Extracts and Phytochemicals

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Message from the Guest Editor

We are pleased to invite you to contribute a Special Issue of the journal *Plants* focused on “Antioxidant and Anti-inflammatory Activities of Plant Extracts and Phytochemicals.” Oxidation and Inflammation are critical processes for normal cellular function and immune responses. Moreover, oxidative stress can trigger inflammation, vice versa, creating a positive feedback loop. Consequently, an imbalance or dysregulation of these processes can contribute to the development and progression of various chronic diseases, including allergies, diabetes, cardiovascular disease, neurodegenerative diseases, and cancer. Therefore, understanding the interconnected nature of oxidation and inflammation is essential for the development of effective strategies for disease prevention and treatment. Targeting both processes represents a promising therapeutic approach for managing these pathological conditions.

Plants serve as a rich source of complex and highly structurally diverse chemical compounds. These compounds often serve as the starting point for drug discovery and development, having provided us with a plethora of clinically useful drugs, including paclitaxel, artemisinin, galantamine, and morphine. Notably, acetylsalicylic acid (aspirin), a nonsteroidal anti-inflammatory drug derived from salicylic acid found in willow and other salicylate-rich plants, has been employed to treat fever and pain for thousands of years. However, many natural compounds beneficial for human health remain undiscovered, particularly with regard to addressing oxidative stress and inflammation-associated diseases. In this context, this Special Issue aims to provide a comprehensive platform for researchers, scientists, and practitioners to share their latest research findings and insights related to the crucial role that plant extracts and phytochemicals play in combating oxidative stress and inflammation. We welcome submissions of original research articles, reviews, and short communications that explore plant extracts and phytochemicals, their antioxidant and/or anti-inflammatory activities, and their pharmacological potential in addressing oxidative stress- and inflammation-associated diseases.



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Special Issue



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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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