

Special Issue on
Antimicrobial and Antioxidant Activities of Natural Compounds

CALL FOR PAPERS

Since ancient times, medicinal plants have traditionally been used for the treatment of different diseases. Nowadays, plants are considered a valuable source of unique natural compounds used in the development of antidiabetic, anti-inflammatory, anticancerous, and antimicrobial drugs. Bacteria, fungi, and viruses are responsible for a range of human diseases. Microbial invasion and its virulence can cause damage to the host cells. Effective antimicrobials have been developed over the years; however, a dramatic increase in resistance to antimicrobial drugs has been observed. The resistance to these drugs has also led to the reemergence of old infectious diseases. Oxidative stress is characterized as an imbalance between the production of reactive species and antioxidant defense activity, and its enhanced state has been associated with many of the chronic diseases such as cancer, diabetes, and neurodegenerative and cardiovascular diseases. Many studies have investigated the antioxidant properties of natural products, but despite the large number of natural products that are currently studied, the search for new natural compounds with antimicrobial and antioxidant activities still remains a growing research area.

This special issue aims to highlight the recent research on new trends and on new antimicrobial and antioxidant natural compounds obtained from medicinal plants. Both *in vitro* and *in vivo* studies with the aim of relating antimicrobial and antioxidant properties of extracts, fractions, synergistic mixtures, and single pure compounds to possible treatments of human disorders and diseases are encouraged. We also welcome the submission of research articles studying the chemical structure of extracts, fractions, and isolated pure compounds. We invite authors who are leading experts in the field to contribute original articles that are not yet published or that are not currently under review by other journals. This special issue intends to provide a forum for researchers to share their recent findings and offer exposure of the published articles to the scientific community. We hope that this special issue will advance knowledge and stimulate new collaborations as well as research directions.

Potential topics include but are not limited to the following:

- ▶ New antimicrobial and antioxidant natural compounds
- ▶ Mechanism of action of antimicrobial or antioxidant natural compounds
- ▶ Novel nanoparticles for the delivery of natural compounds active against microorganism and stress oxidative
- ▶ Synergistic activity of natural compounds
- ▶ Combination strategies between natural compounds and conventional therapeutic approaches
- ▶ Pharmacological evidences (*in vitro*, *in vivo*, and *in silico*) related to antioxidant and antimicrobial activities
- ▶ Multiple methodological approaches for the determination of antimicrobial and antioxidant properties
- ▶ Antioxidant activities and inflammation-related disorders and diseases
- ▶ Antimicrobial activities and drug-resistance phenomena

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ecam/aanc/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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