

**Aims & Scope:**

The first wealth is health". Having in mind this quote of Ralph Waldo Emerson, we should think of Nature as a pool of a wide assortment of natural products with significant nutritional and health-promoting compounds.

Traditionally, plants and other natural products have served mankind as an important source of foods, but also were commonly used for treating various health problems. Many people around the world still rely on botanical remedies as a part of "traditional medicine" or "complementary and alternative medicine". Due to the fact that natural products are characterized by great scaffold diversity and structural complexity, they have played an essential role in drug discovery. Showing a spectrum of biological activities (anticancer, immunostimulating, anti-inflammatory, antioxidant, neuroprotective, hepatoprotective, antimicrobial, etc) natural products are currently a subject of enormous interest in the pharmaceutical, cosmetics, and health food industries. Besides, there are documents of newly discovered activities of medicinal plants whose health-beneficial effects were previously known only in part.

Over time, with the development and progress of the use of herbal medicines and bioactive principles from these sources, there arose a need for better and more efficient use of these materials. The exploration of novel ways of utilization of natural products leads to the development of their application at the nano-scale level. Nowadays, the field of nanoscience and nanotechnology is gaining more and more attention. Nanoparticles (NPs) are synthesized by different methods, including physical, chemical, and biological, but most of them are characterized by various problems like toxicity, different side effects on human health and the environment as well. To overcome the limitations of synthetic processes, there is an increasing interest in using biomolecules (DNA, proteins, enzymes) and biological organisms (plants, algae, microorganisms) as reducing and stabilizing agents for the synthesis of NPs. This green, eco-friendly approach is recognized by the scientific community as necessary to avoid toxic effects and ensure cost-effective procedures of NPs synthesis. The most commonly used nanoparticles are metallic NPs like silver, gold, copper, or zinc NPs.

With respect to all the above, we are witnessing a renaissance of the use of plant-based therapies and botanical health-promoting products.

This thematic issue aims to identify and review the latest achievements in the health-beneficial effects of natural products. It also aspires to highlight the latest research regarding the green synthesis and bioactivity of new metallic nanoparticles using different products from nature, e.g. plants extracts, phenolic compounds, and their use for medical purposes. The prevention and treatment of various diseases should be discussed.

Keywords: Natural products, Health-promoting properties, Nanotechnology, Natural product-based nanoparticles, Biomedical applications.

Subtopics:

The subtopics to be covered within this issue include:

- Natural products
- Plant-based medicines
- Antioxidants
- Anticancer agents
- Antimicrobial agents
- Anti-inflammatory agents
- Antidiabetics
- Green synthesis of nanoparticles, their characterization, and bioactivity

- Application of NPs in treatment of various diseases
- Emerging technologies for drug delivery using NPs
- The application of (Q)SAR approach for the assess the interactions between nanoparticles and biomolecules
- Molecular docking studies for revealing natural product interactions in the organism

Schedule:

- ✧ Manuscript submission deadline: 31-07-2022
- ✧ Peer Review Due: 31-08-2022
- ✧ Revision Due: 30-09-2022
- ✧ Announcement of acceptance by the Guest Editors: 01-10-2022
- ✧ Final manuscripts due: 1-10-2022

Contacts:

Guest Editors:

1. *Jelena B. Popović-Djordjević*

*Affiliation: University of Belgrade, Faculty of Agriculture, Department of Chemistry and Biochemistry,
11080 Belgrade, Serbia.*

Email: jelenadj@agrif.bg.ac.rs

2. *Jelena S. Katanić Stanković*

*Affiliation: University of Belgrade, Faculty of Agriculture, Department of Chemistry and Biochemistry,
11080, Belgrade, Serbia.*

Email: jkatanic@kg.ac.rs

Any queries should be addressed to ctmc@benthamscience.net.