

Special Issue on  
**Metabolomics Approach to Analyze Complex Products of  
Medical, Nutraceutical, and Economical Interest**

# CALL FOR PAPERS

Metabolomics is defined as the study of all chemicals (metabolites) produced by and present in a living organism. With the improvement of instrumentation and data system, the metabolomics of complex products leads to a better understanding of their molecular patterns. Since the introduction of metabolome research, there have been two main groups of metabolomic analysis: metabolite profiling, which involves metabolite identification and quantification, or metabolite fingerprint, which aims to compare metabolite patterns without the need of identification.

Metabolomics has been successfully applied to provide insights about complex mixtures of diverse origins, for example, for quality control of natural substances such as plant extracts and formulated products or for early detection of ailments based on biochemical markets.

By means of metabolomic analysis, it is possible to understand and control a lot of processes such as cultivation conditions, harvesting time, storage methods, industrial processing, and stability. Metabolomics is already at a stage of applicability for tracing and tracking/adulteration and authentication of food, food supplements, and drugs. In nutrition science, metabolomic analysis is useful for revealing system biology outcomes associated with changes in diet.

We invite researchers to contribute original research and review articles about applications of sophisticated analytical methods altogether with statistical tools to solve complex problems in the field of natural products, medicine or nutrition.

Potential topics include but are not limited to the following:

- ▶ Targeted and untargeted metabolomics methods
- ▶ Characterization of natural products such as herbal extracts or animal derivate medicines
- ▶ Nutraceutical products
- ▶ Standardization issues
- ▶ Metabolomics assessment of natural products to seek quality, efficacy and safety
- ▶ Fraudulent miss-description on food and nutraceutical products labels, adulteration
- ▶ Chemotaxonomy: plant species discrimination
- ▶ Biochemical markers detection
- ▶ Metabolomics-based toxicology
- ▶ Biomarker-detection in the food quality/safety field
- ▶ Analytical approaches to overcoming reproducibility issues/analytical variability
- ▶ Data processing to multivariate data analysis
- ▶ Validated procedures to prove the appropriateness of the conclusion drawn from the data analysis
- ▶ Strategies to develop an analytical method based on metabolomics
- ▶ Marine metabolomics
- ▶ Metabolomics of traditional medicine
- ▶ Metabolomics and translational research
- ▶ Pharmacokinetics of natural complex products in biological fluids of human or animal origin

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

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

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