

## Special Issue

# Natural and Synthetic Lactones: Isolation, Synthesis, Biotransformations and Biological Activity

### Message from the Guest Editors

Lactones are secondary metabolites of plants, insects, microorganisms and marine organisms. Lactones are widely distributed in foods and beverages, contributing to their specific tastes and flavors. Natural and synthetic lactones possess a broad spectrum of biological activity, including antifeedant, antimicrobial, anti-inflammatory and cytotoxic activities. Many lactones exhibit interesting odoriferous properties; they also function as pheromones in the world of animals, insects and microorganisms. In most cases, their structure is very complex—apart from various lactone ring sizes, they also contain additional functional groups, e.g., hydroxyl groups, carbonyl groups, ester groups or epoxide rings, or other structural elements like aromatic rings or halogen atoms. Lactones with isoprenoid structure represent a group of particular importance. Contributions to this Special Issue should cover all aspects of any biological activity of new lactones (anticancer, anti-inflammatory, cytotoxic, antimicrobial) together with their isolation, chemical and chemoenzymatic synthesis and biotransformations by different biological systems.

### Guest Editors

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### Deadline for manuscript submissions

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## International Journal of Molecular Sciences

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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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