

Special Issue on **Chemical Modifications and Applications of Natural Scaffolds**

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The structural modification of natural products covers the chemical derivatization of scaffolds isolated from natural sources and is highly relevant as such molecular changes provide new insights into the bioactivities and structure-activity relationships against specific targets that are critical for the exploration of a still unknown chemical space. Their unique structural complexity and diversity is key to this wide range of applications, allowing the development of new drugs and unveiling the molecular mechanisms of their biological targets. Natural products are also strategic in drug discovery programs, enabling the development of new and more effective lead compounds and contributing to address significant economic and societal challenges. However, as the activities of such isolated scaffolds are frequently nonoptimal, chemical modification of either the scaffold and/or functional groups is one of the best suited approaches to increase its potency and selectivity towards a given target. Thus, such modified compounds contribute in a decisive manner to speed up the bench-to-bedside optimization process by providing insights into how to improve the potency and selectivity of lead compounds, from which the data obtained can later be used in several drug development pipelines.

This special issue aims to attract original research and review articles from all scientific communities focused on extraction and isolation of products from natural sources. Although broad enough to attract the previously mentioned communities, the suggested topics are also focused on attracting specific groups that develop structure-activity relationships by building small libraries of compounds from isolated scaffolds, thus greatly contributing to an increase in the pool of known compounds, isolated or chemically modified, by expanding the known chemical space.

Potential topics include but are not limited to the following:

- ▶ Novel anticancer drugs and/or multidrug-resistant reversers
- ▶ New antibiotics against the global priority list of antibiotic-resistant bacteria
- ▶ Novel compounds against degenerative and metabolic disorders
- ▶ Novel hits against malaria and tropical neglected diseases
- ▶ Characterization of novel scaffolds and bioactivities from marine products
- ▶ New approaches towards the chemical optimization of natural scaffolds
- ▶ Mechanistic insights into structure-activity relationships of natural products
- ▶ Polymeric drug carrier systems for enhancing cellular uptake of bioactive products

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jchem/medicinal.chemistry/intn/>.

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

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