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Special Issue Reprint

## Natural Products Chemistry: Advances in Synthetic, Analytical and Bioactivity Studies

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The chemistry of natural products is rich in diversity, which can be noted from several perspectives. Plants, fungi, and marine organisms represent sources of small molecules characterized by unique complexity related to their varied scaffolds, functional groups, and stereochemistry. At the same time, extraction, de novo synthesis, derivatization, and semi-synthetic approaches represent challenging tasks for organic chemists. In parallel, analytical profiling of the content of organic compounds and microelements in natural matrices pushes experimental techniques to the edge of their potential due to the complex tasks involved in sample preparation and data elaboration. Additionally, flavonoids, alkaloids, and terpenes, as well as their semisynthetic derivatives, attract the interest of medicinal chemists due to their beneficial biological effects, which include antioxidant, antiproliferative, antibacterial, and anti-inflammatory activities. This Special Issue aimed to collect original contributions to describe the extraction, structural elucidation, and synthesis of natural, semisynthetic, and nature-inspired synthetic molecules. Moreover, articles that discuss the analysis of the content and bioactivity of natural compounds in complex matrices, as well as review articles that focus on the chemistry of natural products, were considered in combination with research articles that describe significant results in terms of their innovative synthetic and extractive, as well as advanced analytical, techniques (chromatography, 1D and 2D NMR, mass spectrometry, IR and UV spectroscopy, etc.).

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