

Special Issue

Cutting-Edge Advances in Natural Bioactive Compounds

Message from the Guest Editor

Natural bioactive compounds—found in foods, plants, fungi, and microorganisms—are increasingly recognized for their therapeutic and preventive potential. These compounds exhibit a broad spectrum of biological activities, including antioxidant, anti-inflammatory, antimicrobial, and anti-cancer effects. Plant-based substances like Taxol, derived from the bark of the Pacific Yew tree, have made a significant impact on modern oncology, finding successful use in chemotherapy. The development of antibiotics like penicillin, originally derived from molds, has revolutionized the treatment of bacterial infections, saving countless lives. Other plant-based antibiotics, such as vancomycin and gentamicin play a crucial role in medicine, especially in treating severe infections caused by resistant bacteria. This issue welcomes research on phytotherapeutics—plant-based substances long used in traditional medicine—and the expanding field of fungal-derived compounds. Substances like psilocybin, beta-D-glucans, and ergothioneine are now the subject of intensive study for their potential in immune modulation and cancer therapy.

Guest Editor

Dr. Joachim Storsberg

Division of Life Science and Bioprocesses, Fraunhofer Institute for Applied Polymer Research (IAP), Geiselbergstraße 69, 14476 Potsdam-Golm, Germany

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MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences,
Sez-Biochimica, Faculty of Medicine, Università Politecnica delle
Marche, Via Ranieri 65, 60100 Ancona, Italy

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