







Special Issue Reprint

Plant-Based Bioactive Substances Identification, Extraction, and Application

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This Reprint compiles nine peer-reviewed research papers that collectively examine natural products of plant origin, particularly secondary metabolites produced by plants in response to abiotic and biotic stresses. These compounds exhibit remarkable structural diversity, reflecting the vast chemical richness found in plant ecology, and they play key roles in the interactions between plants, microorganisms, and animals. The study of this chemical diversity offers valuable insights and directions for applications in the food industry, medicinal chemistry, biotechnology, and agrochemistry. The discovery of bioactive compounds typically involves their extraction, isolation, structural elucidation, and the evaluation of their biological activity. Common techniques employed for structural elucidation include nuclear magnetic resonance (NMR) spectroscopy, often supported by density functional theory (DFT) calculations, as well as mass spectrometry and infrared spectroscopy. This Special Issue of *Plants* highlights bioactive compounds of plant origin, with a particular focus on their extraction, identification, biological evaluation, and potential applications.





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