Special Issue

Natural Phytochemicals as Modulators of Cellular Pathways and Therapeutic Targets in Disease Models

Message from the Guest Editor

This Special Issue focuses on the molecular mechanisms by which plant-derived compounds modulate cellular signaling pathways relevant to health and disease. Phytochemicals such as polyphenols, alkaloids, flavonoids, terpenoids, and saponins have demonstrated potential in regulating oxidative stress, inflammation, apoptosis, autophagy, and metabolic reprogramming. Their ability to target key signaling pathways—including MAPK, PI3K/Akt, NF-□B, and Nrf2—makes them promising candidates for therapeutic development. We aim to gather original research, review articles, and translational studies investigating the effects of phytochemicals in preclinical or clinical models of cancer and neurodegenerative, cardiovascular, and metabolic disorders. Submissions addressing pharmacokinetics, bioavailability, and synergistic effects with conventional therapies are also highly encouraged. This Special Issue will provide a platform to advance our understanding of natural products as bioactive modulators and their potential roles in disease prevention and treatment. We warmly invite you to contribute original research articles or comprehensive reviews to this Special Issue.

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Message from the Editor-in-Chief

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