Special Issue

Role of Bioactive Compounds in the Regulation of Mitochondria and Oxidative Stress and Their Therapeutic Potential as Anti-cancer Agents

Message from the Guest Editors

For the past two decades, bioactive compounds from plants, marine organisms, microorganisms, and endogenous factors have gained much attention in cancer treatment due to their significant efficacy and fewer adverse effects. In this context, recent research focused on the possibility of preventing or controlling cancer using bioactive compounds. Cancer is a leading cause of death in the world, accounting for about 10 million deaths in 2020. Chronic oxidative stress and inflammation have been implicated in the pathogenesis of several cancers. Cancer cells are known to manifest oxidative stress via abnormal energy metabolism including aerobic glycolysis (Warburg effect) or oxidative phosphorylation (OXPHOS) or both. Cancer metabolism-associated oxidative stress can account for cancer cells' survival and cell death; thus, the factors that regulate the homeostasis and/or dysregulation of oxidative signaling will be important biomarkers and therapeutic targets in cancer therapy. Therefore, bioactive compounds from natural herbs may alter the oxidative stress and the OXPHOS levels to interfere with the cancer formation, progression, or reoccurrence.

Guest Editors

Dr. Arulkumar Nagappan
Prof. Dr. Yuseok Moon
Dr. Ki Hyung Kim

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Biomolecules
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
biomolecules@mdpi.com

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Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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Department of Cellular and Molecular Medicine, Faculty of Health and Medical Sciences, University of Copenhagen, Blegdamsvej 3C, DK-2200 Copenhagen, Denmark

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