Special Issue

Oxidative Stress and Inflammation in Aging and Cancer: Biological Bases, Therapeutic Strategies and Opportunities

Message from the Guest Editor

Oxidative stress and inflammation are two interconnected processes, playing a crucial role in physiological and pathological conditions, such as aging and cancer. Oxidative stress is generated by an imbalance between the production of reactive oxygen species (ROS) and antioxidant defenses, leading to damaged cells, proteins and DNA. This damage accelerates the aging process and increases the risk of developing cancer. In turn, chronic inflammation appears when the activation of the immune system is maintained over time. This state promotes the growth and spread of cancer cells, as well as contributes to age-related impairments. Both processes can further exacerbate the aging-related manifestations and cancer development. Based on that, growing interest in developing therapeutic strategies targeting oxidative stress and inflammation against aging consequences and cancer are being reported. Antioxidant and anti-inflammatory drugs, as well as natural interventions, such as lifestyle modifications have shown promising results in reducing oxidative stress and inflammation, thereby exhibiting the potential of slowing down the aging process and reducing the risk of cancer.

Guest Editor

Dr. Antonio Garrido

Department of Biosciences, School of Biomedical and Health Sciences, Universidad Europea de Madrid (UEM), Villaviciosa de Odón, E-28670 Madrid, Spain

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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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