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## Natural Antioxidants and the Immunomodulation of Chronic and Transmissible Diseases

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### Message from the Guest Editors

Oxidative metabolism is a critical component in maintaining homeostasis and biological function. With aging, this metabolism, which continuously produces pro-oxidative molecules and endogenous antioxidants, tends to change mainly due to the decline in the mitochondrial and autophagic function of cells. Oxidative stress triggers a cascade of events that leads to immunosenescence characterized by the establishment of patterns of chronic inflammatory states associated with the risk and progression of non-transmissible diseases. In addition, it can negatively impact the immune efficiency against pathogens, increasing the risk of hospitalization and infection-related deaths. The evidence suggests that natural antioxidants in foods and phytotherapeutics have immunomodulatory action, attenuating low-grade inflammatory states and improving the immune response. This Special Issue aims to provide a broad and updated overview of the antioxidant's impact on immunosenescence, non-transmissible diseases associated with chronic inflammation, and efficiency improvement of the immune response to pathogens, especially viruses and bacteria.





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## Message from the Editor-in-Chief

It has been recognized in medical sciences that in order to prevent adverse effects of "oxidative stress" a balance exists between prooxidants and antioxidants in living systems. Imbalances are found in a variety of diseases and chronic health situations. Our journal *Antioxidants* serves as an authoritative source of information on current topics of research in the area of oxidative stress and antioxidant defense systems. The future is bright for antioxidant research and since 2012, *Antioxidants* has become a key forum for researchers to bring their findings to the forefront.

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