BioMed Research International

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Special Issue on

Impact of Nutritional and Environmental Factors on Inflammation, Oxidative Stress, and the Microbiome

CALL FOR PAPERS

Studies suggest that active inflammatory response and oxidative stress are the most prominent symptoms from which patients with metabolic diseases suffered. Meanwhile, the gut hosts a complex community of microorganisms which are highly associated with human physiology, metabolism, and immune status; the effect of gut microbiota in health and diseases becomes clear.

Growing evidence indicates that nutrients and environmental factors are tightly associated with the generation of reactive oxygen species (ROS) and reactive nitrogen species (RNS), oxidative stress, endoplasmic reticulum stress, and gut microbiome. Meanwhile, nutritional factors such as certain natural compounds and nutraceuticals may protect cells from oxidative/endoplasmic reticulum stress and thus ameliorate oxidative/endoplasmic reticulum stress-related diseases via changing of the microbiota. In this way, nutritional factors or molecules perform a vital function in repairing metabolic disorders that result from oxidative/endoplasmic reticulum stress. However, the detailed mechanisms underlying the role of environmental and nutritional factors on regulation of inflammation, oxidative/endoplasmic reticulum stress, and the microbiome in chronic diseases remain largely unexploited and unclear.

In this special issue, we invite investigators to contribute original research articles using *in vitro* or *in vivo* models and clinical studies to the extant body of literature addressing the roles of natural compounds and environmental factors in regulation of oxidative/endoplasmic reticulum stress and further explore the cellular and molecular mechanisms underlying their actions. Review articles are also welcome.

Potential topics include but are not limited to the following:

- The role of environmental risk factors in the development of human oxidative/endoplasmic reticulum stress-related human diseases
- The role of nutritional factors in modulating gut microbiota and oxidative/endoplasmic reticulum stress
- The impact of nutritional and/or environmental factors on molecular, genetic, and biochemical biomarkers of oxidative/endoplasmic reticulum stress-related diseases, including lipid metabolism, autoimmune responses, genome stability, immunological memory, degenerative disease, and chronic inflammation or chronic pain
- Development of nutritional strategies to reduce the risks caused by environmental factors

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/bmri/biochemistry/neio/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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