Special Issue

Toxic Effects and Metabolic Regulations of Hazardous Chemicals in Animal-Derived Food

Message from the Guest Editors

Chemical contaminants, including veterinary drugs, heavy metals, nanomaterials, environmental pollutants, feed additives, and natural toxins (such as mycotoxins and bacterial toxins) can occur in animal-derived food, and could cause various harmful effects to animals or humans, including hepatotoxicity, nephrotoxicity, reproductive toxicity, neurotoxicity, or cardiovascular toxicity. The toxic effects caused by chemical hazard contaminants are often complex and content-dependent. Recent studies showed that some chemical hazard contaminants could induce metabolism-dependent cell death by affecting multiple metabolic pathways in cell autophagy and ferroptosis, including glycolysis, pentose phosphate pathway, hexosamine biosynthetic pathway, and tricarboxylic acid (TCA) cycle, These evidences reveal that metabolism regulations may play a critical role in chemical contaminants-induced toxic effects or cell death. In this Special Issue, we aim to collate innovative original research and review articles that reveal the toxic effects of chemical hazard contaminants, molecular mechanisms, and metabolic regulations by using in vitro and in vivo models.

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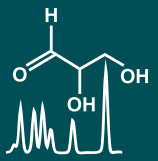

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The metabolome is the result of the combined effects of genetic and environmental influences on metabolic processes. Metabolomic studies can provide a global view of metabolism and thereby improve our understanding of the underlying biology. Advances in metabolomic technologies have shown utility for elucidating mechanisms which underlie fundamental biological processes including disease pathology. *Metabolites* is proud to be part of the development of metabolomics and we look forward to working with many of you to publish high quality metabolomic studies.

Editor-in-Chief

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