

Special Issue

Dietary Selenium and Its Antioxidant Properties Related to Growth, Lipid and Energy Metabolism

Message from the Guest Editors

Selenium (Se) is a potent antioxidant trace element which contributes to regulate the cell cycle, the tissue development and the correct body function. Se plays its biological action by forming part from 25 selenoproteins, most of them with antioxidant properties such as Glutathione Peroxidases (GPxs) and Selenoprotein P (SeLP), which are also related to endocrine regulation, appetite, growth and energy homeostasis. Strikingly, high dietary Se intake in rodents induces insulin resistance and obesity, whereas low- Se diets leads to metabolic disorders related to type 1 diabetes and catabolic process. Moreover, Se influences the metabolism of thyroid hormones by eight selenoproteins, among them deiodinase 1 (Dio1), Dio2, and Dio3, affecting the basal metabolic rate. These effects are even more important during gestation period, where tissues are developing, and could represent an important risk factor for diseases during adulthood. We welcome papers concerning Se and selenoproteins and their relationship to oxidative stress, growth and/or lipid and energy metabolism which could leads to metabolic disorders.

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About the Journal

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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