



NADPH Oxidases in Metabolic Homeostasis

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Message from the Guest Editor

Metabolic homeostasis is maintained by a tightly regulated balance between energy intake, storage, and utilization. NADPH oxidases (NOX-es) and dual oxidases (DUOX-es) belong to a family of enzymes with the primary function of ROS production. NOX/DUOX isoforms are present in tissues with prominent roles in the regulation of metabolic homeostasis (e.g., liver, muscle, kidney, white and brown adipose tissues, the hypothalamus, and the islets of the pancreas). In several of these tissues, dysregulated NOX/DUOX expression or activation has been associated with disturbed insulin signaling and metabolic function. Due to their tightly-controlled ROS production, NOX/DUOX enzymes elicit high interest in relation to both metabolic health sustainment and the development of metabolic disorders, and are thus considered to be promising pharmaceutical targets in obesity, insulin resistance, and diabetes.

The aim of this “Special Issue” is to provide a forum for recent research advances regarding the regulatory function of NOX/DUOX isoforms in the maintenance of metabolic balance and their alterations in diabetes and diabetes-related complications.





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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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