Special Issue

Iron Metabolism in Cells

Message from the Guest Editors

Iron is an essential micronutrient for various biological processes, but it can be toxic when participating in the Fenton reaction and thus contributing to the production of reactive oxygen species. It is important to maintain cellular iron homeostasis by regulating its uptake, storage, utilization, and exportation. Alterations to any iron-related pathway may lead to iron dysregulation, depletion, or overload, associated with disorders such as anemia or hemochromatosis. Iron can also contribute to tumorigenesis, and "iron addiction" is a well-described phenomenon in cancer cells. Overall, growing interest in iron's involvement in biological and pathological processes has led to new directions in in vitro studies, allowing us to better understand the molecular basis behind these processes. We are pleased to invite scholars in related fields to contribute to this Special Issue "Iron Metabolism in Cells". This Special Issue aims to provide an overview of recent research on cellular iron metabolism, including biological processes such as iron transport and utilization and their regulation in physiological and pathological conditions, along with potential therapeutic applications.

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