

Special Issue

Regulation and Activation of Immune Cells through the Mitochondria

Message from the Guest Editor

Activation of immune cells, as one of the key regulation processes of immune cells, is critically dependent on specific metabolic programs with mitochondria involvement. Upon activation by a virus, bacteria or their products, immune cells undergo dramatic metabolic changes, dictated by mitochondria, including the generation of ATP from the oxidation of nutrients and supplying precursors for the synthesis of macromolecules and post-translational modifications. When activated, T cells swiftly undergo proliferation and intensify gene transcription-translation processes to support essential immune responses, including the production of cytokines and adhesion molecules. All these alterations in metabolism of mitochondria aid the cells in combating invading pathogens, both through direct and indirect mechanisms. This Special Issue is focused on the understanding regulation of different immune cells through mitochondria, how regulation of immune cells is impacting mitochondrial dynamics, biogenesis, mitophagy.... Additionally, how dysregulation of immune cells such as different forms of inflammation are affecting mitochondria phenotype in immune cells.

Guest Editor

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Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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