

## Special Issue

# Mitochondrial Protein Network: From Biogenesis to Bioenergetics in Health and Disease 2.0

### Message from the Guest Editor

Mitochondria contain more than 1000 proteins encoded by both mitochondrial and nuclear genomes. Although mitochondria contain autonomous genomes (mitochondrial DNA), the great majority of mitochondrial proteins are encoded by nuclear genes synthesized by cytosolic ribosomes and translocated into mitochondria by multicomponent import machinery. Mitochondrial proteins perform functions crucial for the viability of eukaryotic cells, as they are involved in respiration, metabolite transport, protein translocation, protein quality control, oxidoreductive homeostasis, and numerous other processes. Interestingly, mitochondrial protein machineries, which have diverse functions, are connected in complex and dynamic networks, and the failure of these systems can lead to the development of disease. The aim of this Special Issue is to reveal the complexity and versatility of mitochondrial activities, integrating mitochondrial energetics and metabolism with protein biogenesis. A deeper investigation of the functional crosstalk between mitochondrial proteins may reveal the importance of this crosstalk in contributing to pathologies caused by dysfunctional mitochondria.

### Guest Editor

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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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