

Special Issue

Mitochondrial Dysfunction: A Common Trigger in Neurodegenerative and Metabolic Non-communicable Diseases

Message from the Guest Editors

Non-communicable diseases (NCDs) are non-infectious and non-transmissible chronic disorders. They include neurodegenerative diseases, autoimmune diseases, cardiovascular diseases, cancer, diabetes and obesity. NCDs are characterized by low-grade inflammation and oxidative stress and are frequently associated to a marked mitochondrial dysfunction. Mitochondrial functionality is the result of a fine tuned balance between biogenesis, morphology and mitophagy. The impairment of this quality control and the consequent engulfment of the cells with dysfunctional organelles leads to the release and accumulation of damage-associated molecular patterns (DAMPs) able to trigger inflammatory response. Therefore, mitochondrial dysfunction induces inflammation and the inflammation itself causes mitochondrial dysfunction. Contributions of reviews and original research papers will be strongly appreciated, with particular emphasis on mitochondrial dysfunction and chronic inflammation, the microbiota-mitochondria crosstalk and the potential therapeutic approaches in neurodegenerative and metabolic NCDs.

Guest Editors

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