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The Key Roles of Mitochondrial and Metabolic Disorders in Cell Dysfunctions and Progression of Diseases

Guest Editor

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Message from the Guest Editor

Dear Colleagues,

Mitochondria is the main location for various cellular functions and energy production, and mitochondrial functions in the development of cardiovascular and metabolic diseases have emerged as a universal feature of these metabolic disorders. Initial studies have highlighted the contribution of mitochondrial functions to organ remodeling, heart failure, liver failure, and renal failure. Recently, it is demonstrated that metabolic disorders, including metabolic flexibility, metabolic switching, metabolic poise, metabolic plasticity, metabolic reprogramming, metabolic rewiring, metabolic conditioning, metabolic imprinting, and causal metabolism may participate in acute, subacute and chronic organ dysfunctions or pathogenesis. However, the molecular mechanism and cellular pathways through which the balance of mitochondrial functions and metabolism regulation kept remain poorly understood.

Hence, due to the highly clinical and translational significance in mitochondrial functions and

metabolism regulation, it is important to investigate the roles of mitochondria and metabolism in cell dysfunctions and provide insights into their correlations. This collection of articles aims at promoting such crosstalk and accelerating discoveries in the emerging fields of metabolism.

Prof. Dr. Junmeng and Dr. Jun Tao

Guest Editors

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