

## Tentative Outline

### Special Thematic Issue for the journal "Current Topics in Medicinal Chemistry"

**Title of the Thematic Issue: Mitochondrial dysfunction in diabetic complications**

*Guest Editor: Wentao Liang*

*Co-Guest Editor: Jian-Xing Ma*

#### • **Scope of the Thematic Issue:**

Diabetes Mellitus (DM) is a chronic hyperglycemic disease with inimical effects on the mitochondria leading to many complications including heart disease, cerebrovascular disease, chronic kidney disease, nerve damage, and other problems with feet and vision. The production of ATP through oxidative phosphorylation, the generation of reactive oxygen species (ROS) and the regulation of apoptosis are the main functions of mitochondria associated with the pathogenesis of diabetes. The molecular mechanisms of mitochondrial dysfunction in these target organs for the major complications of diabetes remains vague.

#### **Keywords:**

Diabetic complication, mitochondria dysfunction, reactive oxygen species, metabolic profile, diabetic retinopathy, blinding complications, molecular pharmacology, nanoparticle

#### **Sub-topics:**

- Metabolic profiles changes in specific cells or organs under diabetic condition
- The role of mitochondrial function in target cells or organs of specific diabetic complications
- New study strategies (for example, new animal model, new measurement approach) to assess diabetic complication
- Molecular mechanisms of mitochondrial dysfunction in cells or organs related to specific diabetic complication
- Preclinical and clinical studies related to diabetic complication
- Novel therapeutic targets related to mitochondrial dysfunction and diabetic complications
- Nanotechnology or advanced materials to increase the therapeutic effect of molecules for diabetic complications

#### **Schedule:**

- ✧ Thematic issue submission deadline: September 2023

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