Tentative Outline

Special Issue for Current Medicinal Chemistry

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Current trends in heart failure treatment: the role of mitochondria

Aims & Scope:

Heart failure remains an increasing global problem and the endpoint of a variety of congenital as well as acquired cardiac diseases. Despite a clear pharmacological management algorithm, heart failure is responsible in most Westernised economies for 1-2% of all healthcare expenditure. The bulk of these costs are mainly driven by frequent, prolonged and repeat hospitalisations due to failure of the medical treatment.

Accumulating evidence suggest that mitochondrial dysfunction plays a critical role in the development of heart failure. We have previously reported an early and progressive depletion in mitochondrial DNA copies in myocardial tissue of patients undergoing cardiac surgery. In this special issue of CURRENT MEDICINAL CHEMISTRY we will review current trends in the development of heart failure pharmacotherapies and emphasize on those approaches targeting the mitochondria.

- **Keywords:** Mitochondria, cardiac disease, mitochondrial autotransplantation, mitochondrial kinase inhibitors, cybrids.

Sub topics:
- Mitochondrial haplogroups and disease
- Mitochondrial autotransplantation
- Fatty acids mediated mitochondrial alterations in cardiovascular disease
- Nanoparticles in cardiovascular disease
- Nanomedicines for the prevention of postoperative low cardiac output syndrome
- Mitochondrial kinase inhibitors in cardiovascular disease.
- Cybrids in cardiovascular disease

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