



BioMed Research International

Special Issue on

Mitochondria and Cardiovascular Disease

CALL FOR PAPERS

Cardiovascular disease (CVD) is the leading cause of death in the world. CVD is a class of diseases that involve the heart or blood vessels. It includes coronary artery diseases (CAD) such as angina and myocardial infarction (commonly known as a heart attack). Although the scientific community has made significant progress in the area of cardiovascular disease more work needs to be done to understand the molecular pathology of cardiovascular disease. Recent studies demonstrated that mitochondria play an important role in the cardiovascular system and alterations in mitochondrial function are considered to be a major contributing factor. Abnormalities in the mitochondrial organelle structure and function have been found with increasing frequency in association with cardiovascular diseases such as dilated (DCM) and hypertrophic cardiomyopathy (HCM), cardiac conduction defects and sudden death, ischemic and alcoholic cardiomyopathy, and myocarditis. While aberrations in the bioenergetic function of the mitochondria are frequently related to the cardiac dysfunction, the specific defect causing the bioenergetic dysfunction often resides in a nonbioenergetic pathway, for example, signaling between the mitochondria and nucleus or in overall mitochondrial biogenesis and/or degradation pathways. Understanding these pathways and the impact of mitochondrial defects in cardiac pathology is important to improve diagnosis and treatment of mitochondrial-based cardiac diseases.

Therefore, we invite investigators to contribute original research articles as well as review articles that will stimulate the continuing efforts to understand the molecular pathology underlying cardiovascular disease with a special emphasis on mitochondrial function.

Potential topics include, but are not limited to:

- ▶ Role of the molecular basis of mitochondria in ischemia reperfusion
- ▶ Elucidating the cell signaling pathway that contributes to apoptosis and cell death in CVD
- ▶ Mechanisms and consequences of postischemia myocardial inflammation
- ▶ The role oxidative stress plays in cardiovascular disease
- ▶ Mitochondrial genetics and cardiovascular disease
- ▶ Energy production and metabolism in cardiovascular diseases
- ▶ Mitochondrial dynamics and morphology during cardiovascular disease

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/bmri/cardiology/mccd/>.

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Manuscript Due

Friday, 23 September 2016

First Round of Reviews

Friday, 16 December 2016

Publication Date

Friday, 10 February 2017