

Special Issue on
**Mediators of Heart Failure and Metabolic Consequences:
 Improvements in the Prevention or Treatment of Heart
 Failure**

CALL FOR PAPERS

Heart failure (HF) is a cardiovascular disease with an increasing prevalence, nowadays affecting 1-2% of the population in developed countries, with a remarkable impact in terms of human and economic resources. It has systemic and multiorgan consequences with metabolic failure as basic mechanism. Indeed, mitochondrial function and metabolic profile of slow and fast skeletal and cardiac muscle are altered in chronic heart failure. Patients with HF typically manifest insulin resistance and prevalence of type 2 diabetes. The clinical symptoms of heart attack may vary both in type and in severity: some people have mild to severe pain; others are asymptomatic, while others suffer immediately a sudden cardiac arrest. Clinical advances greatly ameliorated the available cures for cardiac pathologies, but a main obstacle still resides in the fact that the heart substitutes its damaged ischemic muscle with scar tissue. The potential usefulness of laboratory tests to predict cardiac distress will depend on the well-established biomarkers of metabolic state of the heart, which nowadays are not available. Particularly interesting in this regard are micro-RNAs that are secreted from the cells and emerged as key regulators of metabolism. Future approaches to the evaluation of heart health will require the establishment of biomarkers, even more valuable if circulating, and suitable cell sources for the replacement of damaged tissue.

We invite investigators to submit original research articles and reviews to this special issue having the purpose to address improvements in order to prevent damage or to repair or replace damaged heart tissue.

Potential topics include but are not limited to the following:

- ▶ Recent developments in the understanding of stem cells activity in the heart and skeletal muscle
- ▶ Human-induced pluripotent stem cells in the treatment of heart failure
- ▶ Bioengineering approaches to develop replacement tissue or parts of damaged heart
- ▶ Association of candidate biomarkers with heart diseases
- ▶ Noncoding RNAs in heart disease and their applicability as biomarkers or in therapy of HF
- ▶ Noncoding RNAs regulating heart stem cell behaviour
- ▶ Recent advances in the modulation of heart and related skeletal muscle pathologies
- ▶ Potential beneficial effects of voluntary activity on cardiac and skeletal muscle energetics in heart failure
- ▶ Diagnostic issues of heart diseases
- ▶ Etiology, incidence, epidemiology, and trends of heart diseases
- ▶ Clinical population studies of hospitalized patients with HF and prevalence, morbidity, and mortality of heart failure-related hospitalizations in adult and children
- ▶ Clinical analysis of HF in association with other pathologies
- ▶ Managing steps and clinical trial of heart diseases
- ▶ Clinical and demographic characteristics, illness severity, and risk status on heart failure
- ▶ Traditional and new immunological, biochemical, and molecular methods for the diagnosis of heart failure
- ▶ Influence of heart failure on metabolic changes of the patients

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

Papers are published upon acceptance, regardless of the Special Issue publication date.

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