Disease Markers

Hindawi

Special Issue on

Biomarkers in Heart Failure and Associated Diseases

CALL FOR PAPERS

Despite considerable improvement in the management of heart failure (HF), unsustainable levels of morbidity and mortality coupled with an increasing economic and social burden have been observed over the previous three decades. A rational explanation of this is the fact that no single pathophysiologic paradigm of HF has been clarified, resulting in failure of our current models to completely explain disease progression.

Biomarkers have an important role in the diagnosis and prognosis of HF, as well as identifying individuals who exhibit a high risk for HF development. In addition, they can be effectively used to identify patients at high risk of related comorbidities.

Classically, seven categories of biomarkers in HF have been described, reflecting the different pathophysiological pathways involved in disease progression. These include myocardial stretch, myocyte injury, matrix remodeling, inflammation, neurohumoral activation, oxidative stress, and indices of renal dysfunction. Moreover, growing evidence supports the key role of alternative pathophysiological pathways (e.g., the gastrointestinal system, the anabolic/catabolic imbalance, and multiple hormonal deficit syndrome), with ever-increasing identifications of novel biomarkers that demonstrate their importance in HF.

In this context, a growing interest in multimarker approaches to examine biomarker panels to assess multiple pathophysiologic pathways has been extensively studied, including the combined use of proteins, lipids, metabolites, hormones, and genetic markers.

Therefore, the aim of this special issue is to focus on the role of biomarkers in Heart failure and associated diseases.

We invite researchers to submit high quality manuscripts reporting original research data, as well as expert review articles, related to the scientific advances in the area of biomarkers of HF and associated diseases. This issue intends to provide insight into recent scientific/clinical advances that highlight the importance of biomarkers in HF and to indicate gaps in our current understanding.

Potential topics include but are not limited to the following:

- Natriuretic peptides and HF
- Hormonal models in HF
- Anabolic/catabolic imbalance
- ST2 and other novel biomarkers
- Gut-heart axis, for example, TMAO and related metabolites
- Inflammation and HF
- Sex differences determining biomarker utility in HF
- Biomarkers in HF associated diseases (e.g., pulmonary hypertension, atrial fibrillation, and cardiometabolic disorders)
- Disease markers in prediction of survival
- Chronobiology of biomarkers in HF
- The use of 'omics in HF, for example, metabolomics, proteomics, and transcriptomics

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/dm/bhfa/.

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

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