

Special Issue on
**Diabetes Mellitus and Its Cardiovascular Complications:
New Insights into an Old Disease**

CALL FOR PAPERS

Diabetes mellitus (DM) is a worldwide problem with a social impact, characterized by a high hospitalization rate and mortality. The American Heart Association considers DM as one of the seven major controllable risk factors for cardiovascular (CV) diseases. In fact, DM is strongly associated with both micro- and macrovascular complications, including retinopathy, nephropathy, and neuropathy, as well as cerebrovascular disease, coronary artery disease (CAD), and peripheral artery disease (PAD). These hyperglycemia-induced pathological conditions may result in organ and tissue damage in one-third to one-half of diabetics. In fact, diabetics are two to four times more likely to die from heart diseases than nondiabetics. Regarding cardiovascular diseases, DM can negatively affect the cardiac function, leading to the development of heart failure (HF). Intriguingly, in patients with HF and preserved HF (HFpEF), DM increases cardiomyocyte hypertrophy and cardiac inflammation, whereas in patients with HF and reduced EF (HFrEF), DM increases fibrosis and cardiomyocyte cell death. In both cases, DM is linked to higher mortality, reduced functional status, and increased risk of hospitalization.

In this special issue, new diagnostic tools for early detection of CV complications are welcome. Diabetic nephropathy, cardiomyopathy, and PAD are frequently diagnosed at later disease stages, and screening programs are inconsistent and inadequate. Diet, exercise training, and lifestyle changes may prevent or delay CV complications of DM. However, there is an urgent need to find new therapeutic approaches to blunt the systemic and tissue-specific effects of hyperglycemia and insulin resistance, to reduce the development of diabetic CV complications. The final goal in the near future will be to find treatments better tailored to diabetic patients using a personalized-medicine approach. Therefore, we invite investigators to submit original research articles, reviews, and clinical studies to this special issue having the purpose of addressing the CV complications of diabetes.

Potential topics include but are not limited to the following:

- ▶ New findings in the pathogenesis of the micro- and macrovascular complications in DM
- ▶ New diagnostic tools for DM early diagnosis and its consequences: biomarkers and imaging
- ▶ New therapeutic approaches for the CV consequences of DM: gene therapy, exosomes, miRNA, incretins, bioengineering approaches, and so forth
- ▶ Diabetes and atherosclerosis: CAD and PAD
- ▶ Diabetic cardiomyopathy: different phenotypes and clinical outcomes
- ▶ Heart failure in diabetics: diagnosis and treatment
- ▶ Diabetes and its consequences during aging: multidimensional therapeutic approach
- ▶ Hyperglycemia-induced systemic and tissue-specific damage
- ▶ Exercise training and diabetic angiopathy
- ▶ Clinical characteristics and outcomes of diabetic patients in different demographic and social settings

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jdr/dmcr/>.

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

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