

## Special Issue

# New Molecules and Mechanisms to Fight the Onset and Progression Cardiovascular Diseases—the Role of Oxidative Stress

### Message from the Guest Editor

Cardiovascular diseases are a growing, worldwide epidemic with an enormous economic burden; as such, the care and prevention of cardiovascular alterations constitute an important world challenge. Reduced endothelial function is an early, subclinical stage of vascular alteration that precedes and accompanies the development of cardiovascular diseases, contributing to vascular complications. Downregulated nitric oxide, caused by either reduced synthesis or inactivation due to increased oxidative stress, significantly contributes to endothelial dysfunction. Although many drugs are effective, their molecular mechanisms and long-term side effects are still unknown and are currently an area of active research. Nowadays, biological markers of oxidative stress-induced endothelial injury lack specificity in predicting disease progression in hypertensive patients. On the other hand, clinical trials of antioxidant treatments have failed to show long-term improvements, suggesting the importance of directly acting on upstream signaling to prevent vascular oxidative stress rather than adopting strategies to scavenge reactive oxygen species.

### Guest Editor

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### Deadline for manuscript submissions

closed (26 March 2021)



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Impact Factor 3.4  
CiteScore 6.0  
Indexed in PubMed



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