

Special Issue

Contribution of Dysfunctional Microvasculature to Cardiovascular Diseases

Message from the Guest Editor

Microvascular endothelium is crucial for the oxygenation and nutrition of tissues. The integrity and barrier function of the endothelium is maintained by intercellular junctions. However, when microvascular endothelial cells become dysfunctional, a decreased barrier function will occur. Activation of the endothelium by damage- or pathogen-associated molecular patterns (DAMPs/PAMPs), disturbed flow, Ox-LDL, or decreased nitric oxide causes upregulation of adhesion molecules such as ICAM-1 and VCAM-1 and NF- κ B mediated cytokine expression. Upon dysfunction, fluids, ions, and cells can cross the endothelium and leak into the underlying extracellular matrix, causing inflammation and negatively affecting the blood vessel wall and cardiovascular disease progression. **Keywords:** endothelial cells; angiogenesis; leukocyte transmigration; intercellular junctions; hemorrhage; inflammation; leaky neovessels; barrier function

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