

Meeting report from the 2nd International Symposium on New Frontiers in Cardiovascular Research. Protecting the cardiovascular system from ischemia: between bench and bedside

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Abstract

Recent advances in basic cardiovascular research as well as their translation into the clinical situation were the focus at the last "New Frontiers in Cardiovascular Research meeting". Major topics included the characterization of new targets and procedures in cardioprotection, deciphering new players and inflammatory mechanisms in ischemic heart disease as well as uncovering microRNAs and other biomarkers as versatile and possibly causal factors in cardiovascular pathogenesis. Although a number of pathological situations such as ischemia-reperfusion injury or atherosclerosis can be simulated and manipulated in diverse animal models, also to challenge new drugs for intervention, patient studies are the ultimate litmus test to obtain unequivocal information about the validity of biomedical concepts and their application in the clinics. Thus, the open and bidirectional exchange between bench and bedside is crucial to advance the field of ischemic heart disease with a particular emphasis of understanding long-lasting approaches in cardioprotection.

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Keywords

Atherosclerosis, Cardioprotection, Cardiovascular disease, Endothelial permeability, Extracellular RNA, High-density lipoprotein, Hypoxia, Inflammation, Ischemia/reperfusion injury, Macrophage polarization, MicroRNAs, Mitochondria, Platelet dysfunction, Vascular biology