

## 9<sup>th</sup> International Symposium of Jagiellonian Medical Research Centre – Editorial

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The tradition of the Symposia of Jagiellonian Medical Research Centre is to present achievements of Western and Eastern researchers in the field of physiology and pharmacology of cardiovascular system. The recent 9<sup>th</sup> Symposium on 'Pharmacology of Vascular Wall' was honoured by participation in it of two Nobel Prize Laureates. Sir John Vane (Nobel Prize 1982) was deeply engaged in discoveries of ACE-inhibitors, prostacyclin and the mode of action of aspirin. He gave his broad and personal view on enzymes and mediators abiding vascular wall and on their significance in health and disease. Ferid Murad (Nobel Prize 1998) is one of the discoverers of biological and pharmacological significance of nitric oxide (NO). He exposed a link between NO and soluble guanylate cyclase in the signal transduction. Stefan Chłopicki pointed out the pneumoprotective role of NO in endotoxemia, while molecular mechanisms triggering the release of ATP from erythrocytes were reported by Randy Sprague. John C. McGiff, the Oversea President of our International Jagiellonian Club, is well known thanks of his studies on cytochrome P 450-dependent pathway, the third pathway of arachidonic acid metabolism. He focused his attention on the dominant regulatory role of 20-hydroxyeicosatetraenoic acid (20-HETE) in preglomerular renal circulation. Mairead A. Carroll developed an idea on a balance between 20-HETE and epoxyeicosatrienoic acids (EETs) in regulation of renal microvessels. William B. Campbell and John

Quilley referred to EETs as to possible candidates for endothelium-derived hyperpolarizing factor (EDHF), that might be a major endothelial product released by atherosclerotic blood vessels. New ideas on atherogenesis were reported by Chris Thiemermann, Angelo Sala and Marek Radomski with respect to high density lipoproteins in vascular inflammation, transcellular biosynthesis of peptidoleukotrienes, and a role of matrix metalloproteinases in vascular wall. Helmut Sinzinger and Heikki Vapaatalo presented clinically important methods for detection of endothelial dysfunction in atherosclerosis, while Gautam Chaudhuri and Jean-Claude Stoclet addressed the question of its correction by either estrogens or wine polyphenols, respectively. Pharmacological correction of endothelial dysfunction was portrayed in a series of lectures by Ryszard Gryglewski, Andrzej Szczeklik and Tadeusz Malinski. This particular cluster of lectures was strongly devoted to the unexpected pleiotropic mechanisms of action of statins. These hypocholesterolemic drugs known as inhibitors of hydroxyglutaryl-CoA reductase have recently become recognised as thrombolytic agents which release endothelial prostacyclin and nitric oxide. Moreover, they act also as antithrombotic agents through inhibition of thrombinogenesis. Marek Naruszewicz rounded up the pharmacological approach by presenting his data on pleiotropic anti-atherosclerotic action of anti-inflammatory drugs.