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## EDITORIAL

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Healthy endothelium is essential for keeping normal cardiovascular function. Endothelial dysfunction leads to a variety of cardiovascular diseases including atherothrombosis, heart failure or diabetes. Consequently, the pharmacology of endothelium seem to represent a new approach to prevent or treat a variety of cardiovascular and metabolic disorders.

Since the first JMRC symposium organized in 1993, the annual JMRC symposia ([www.jmrc.org.pl](http://www.jmrc.org.pl)) chaired by Professor Ryszard Gryglewski and recently by myself, have had the aim of presenting recent developments in the field of vascular biology and medicine, of broadening our knowledge on the complex endothelial machinery that regulates vascular function, and of laying the ground for the novel approaches for pharmacological correction of the maladaptive endothelial function in vascular pathologies.

In 2007, fifteen years of the JMRC Foundation's activity were celebrated by an event organised jointly with the Physiological Society. The International Workshop of the Physiological Society and the jubilee 15th JMRC Symposium entitled "Endothelium: The Determinant of Health and Disease" was held between 9th-12th May 2007 at the premises of the Polish Academy of Arts and Sciences (PAU) in Kraków. The meeting intended to combine the tradition of The Physiological Society of organising international workshops aimed at presenting up-to-date knowledge for young European scientists, and the tradition of JMRC symposia in Kraków focused on vascular biology and pharmacology. The programme of the meeting consisted of state-of-the-art lectures of eminent scientists representing various disciplines, elaborating on the endothelium as "a real maestro of circulation", as well as poster sessions and laboratory demonstrations for workshop participants. The meeting was shaped by the faculty of 21 invited speakers, 63 poster presenters – altogether approximately 200 participants from various European countries and the USA.

The present special issue of the Pharmacological Reports contains 16 papers that, either in the form of a review or of an original contribution, present the topics of the lectures delivered at the symposium. The articles are arranged following the order of the symposium sessions and speakers: Major endothelial mediators (Ryszard Gryglewski, Geoffrey Burnstock, Ajay Shay, Michal Laniado Schwartzman, Jozef Dulak, Karolina Kublickiene); Endothelial regulation of the cardiovascular system (Patrick Pagano, Cor de Wit, Ramarosan Andriantsitohaina, Frank Stassen, Zbigniew Darzynkiewicz); Endothelial dysfunction in cardiovascular disease (Mainrad Gawaz, Caroline Wheeler-Jones, Johann Bauersachs, Stefan Chłopicki) Endothelial cell heterogeneity (William Aird).

It is worth adding that this issue contains not only up-to-date knowledge and views in a number of excellent review articles and interesting original contributions, but also provides a unique historical perspective by the genuine pioneers in their respective fields. Ryszard Gryglewski discloses the endeavor that led to the discovery of PGI<sub>2</sub>, while Geoffrey Burnstock refers to the early resistance to the concept of purinergic signaling when describing its recent developments. Furthermore, the closing article of this issue by William Aird traces back the origins of the terms of the endothelial cell activation and dysfunction and analyzes their historical and current contexts. I do hope that this special issue of Pharmacological Reports is a good continuation of two analogous issues of the Pharmacological Reports published previously (Pharmacological Reports, 2005, 57, Suppl; 2006, 58, Suppl) and will provide excellent material for scientists fascinated by the breath of endothelial research.

Last but not least, on behalf of Lucilla Poston, the co-chair of this meeting, the JMRC Foundation council, and myself, let me take this opportunity to express our gratitude to all speakers and all participants of our meeting. I am grateful to all of them for what we learned and for inspiring us for future scientific endeavours in the field of endothelial research.

*Stefan Chłopicki*  
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