

# ***COLLOQUIA IN PHYSIOLOGY AND VASCULAR BIOLOGY***

Venue: Medical University Vienna, Center for Physiology and Pharmacology,  
Institute of Pharmacology, Waehringerstrasse 13a, 1090 Vienna, "**Leseraum**"  
(Johannes Schmid, Tel.: (01) 40160 31155, [johannes.schmid@meduniwien.ac.at](mailto:johannes.schmid@meduniwien.ac.at),  
Ulrike Resch, Tel.: (01) 40160 31171, [ulrike.resch@meduniwien.ac.at](mailto:ulrike.resch@meduniwien.ac.at))

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Friday 27.11.2015 10:00 s.t. **Apostolos Polykratis** (host: U. Resch)

Institute for Genetics,  
Mouse Genetics and Inflammation  
Laboratory  
University Cologne  
Josef-Stelzmannstraße 26  
D-50931 Köln

## ***"Inflammatory signaling in atherosclerosis: For better and for worse"***

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**Apostolos Polykratis** (email: [apostolos.polykratis@uni-koeln.de](mailto:apostolos.polykratis@uni-koeln.de))

Cardiovascular diseases (CVDs) constitute the major cause of death in western societies and thus an area of great interest for the development of effective therapeutic interventions. Inflammation is recognized as an important pathogenic factor in CVDs, but the mechanisms regulating inflammatory responses and their specific contribution to the development of CVDs and atherosclerosis in particular remain poorly understood. Using genetic models for the study of atherosclerosis in mice our group revealed a putative differential role of immunological pathways in endothelial cells and monocytes/ macrophages during the development of the disease. Our previous work showed that the TLR/ NF- $\kappa$ B axis in endothelial cells is pro-atherogenic while in macrophages it exerts a protective role against plaque development. Our recent studies on the role of TLR/ NF- $\kappa$ B signaling in cells of the vascular wall as well as immune cells during the development of atherosclerotic lesions will be presented. Furthermore possible future directions and the genetic tools available to address unsolved questions on the role of inflammatory pathways in cardiovascular disease will be discussed.