



2nd International Conference on

Clinical Research

Cardiology, Ophthalmology & Dermatology

5-7 March 2012 Omaha Marriott, USA

Transcellular and paracellular mechanisms of vascular hyperpermeability during inflammation

Guochang Hu

University of Illinois College of Medicine,
USA

The vascular endothelium lining the blood vessels functions as a barrier between the blood and interstitial compartments that is essential for the maintenance of tissue homeostasis and normal organ functions. Increased vascular permeability in response to inflammatory stimuli results in extravasation of blood components and tissue edema. Compromised barrier function of the endothelium during inflammation is accompanied by intercellular gap formation, which causes an increase in paracellular permeability. Recently, evidence has emerged to support a role for the caveolae-mediated transcellular pathway in inflammation-induced vascular hyperpermeability. Caveolin-1, an indispensable protein for both the structure and function of caveolae, has been shown to play a crucial role in the regulation of pulmonary vascular hyperpermeability via transcellular and paracellular pathways.

Biography

Guochang Hu is an Assistant Professor at the Departments of Anesthesiology and Pharmacology, University of Illinois College of Medicine. He obtained his PhD from China Medical University and the MD from Xuzhou Medical College. He is currently serving as an editorial board and peer-review member of 13 journals. He has published more than 30 papers and 10 book chapters. As an editor-in-chief, he has published two books in the areas of pharmacology and medicine. He has been serving as a member of AHA Vascular Wall Biology Basic Research Study Section since 2010. His research is currently supported by NIH R01.