## John H. Zhang, MD, PhD

Professor of Anesthesiology, Neurosurgery, Physiology Loma Linda University School of Medicine Loma Linda, CA

## Future Stroke Research: emphasizing recirculation

Stroke has been recognized for more than 2700 years and the current stroke pathophysiology is focused on recanalization and reperfusion or in one word emphasized on the arterial system. The passive cooperation of the venous system with the arterial system are believed and taken for granted over the last thousands of years. This concept has strong limitations if it is not totally wrong. The venous system participates in the acute arterial stroke and influences the outcomes and in some cases plays determining roles. Six potential factors that alter venous blood flow will be presented and discussed. For a complete stroke pathophysiology, a term Recirculation may be used instead of recanalization or reperfusion.