



“A Role for C1q in Normal Brain Aging”

Dr. Alexander Stephan

Post-doctoral Scholar

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Biography

Dr. Stephan is a German postdoctoral scholar in Ben Barres lab in the Department of Neurobiology at Stanford University School of Medicine, USA. He did his M.Sc. degree at the University of Hamburg, Germany and his Ph.D. with Peter Sonderegger at the University of Zurich, Switzerland. Dr. Stephan was a scholar of the German National Academic Foundation during his undergraduate studies, he won the Ph.D. Thesis Distinction and Research Award from the Faculty of Mathematics and Natural Sciences (MNF), University of Zurich, Switzerland, and he was a postdoctoral fellow of the Swiss National Science Foundation. His research focuses on C1q and Complement System-mediated central nervous system plasticity, with the emphasis on identifying the mechanisms of why and how C1q contributes to normal brain aging and neurodegenerative diseases.

Abstract

The decline of cognitive function is one of the greatest health threats for the aged population. However, the cellular and molecular mechanisms underlying age-related cognitive decline are vastly unknown. The molecule C1q is a key player in immune system functions and has recently been shown to also contribute to central nervous system (CNS) development. I will present my recent findings that highly suggest both complement-dependent and independent synaptic functions for C1q in the healthy, mature and aged CNS, including its role in age-dependent cognitive decline in both mice and humans. I will further discuss how these findings suggest novel roles for C1q and complement after CNS injury and in neurodegenerative diseases.

Date and time: Tuesday, 31 July 2012

Time: 3.00 – 4.00pm

Venue: NUS Centre for Life Sciences Seminar Room 2

Host: A/P Soong Tuck Wah, Dept of Physiology