PhD Program between the Freie Universität Berlin (FUB) and the China Scholarship Council (CSC)

**Open PhD Position** at Freie Universität Berlin, offered only to Chinese CSC scholarship candidates 2020

Please Note: this PhD position is only offered to Chinese PhD candidates for the application in the framework of the FUB-CSC PhD Program.

**Department/Institute:** Institute for Biology/Neurogenetics

**Subject area:** Genetics and Developmental Biology

**Name of Supervisor:** Stephan Sigrist, PhD, Professor of Neurogenetics

**Number of open PhD positions:** 1

**Type of the PhD Study:** Fulltime

**Project title:** Synaptic mechanisms of age-induced memory impairment

**PhD Project description:**

Synaptic function is the basis of all neuronal and cognitive processes including thinking, dreaming, memory formation and learning. Our group has pioneered the use of high end super-resolution light microscopy (STED) to investigate the presynaptic architecture with a to date unknown resolution and precision (Bohme et al., 2016; Kittel et al., 2006; Liu et al., 2011). We recently demonstrated a causal link between fundamental synaptic mechanisms and age-induced memory impairment (Gupta V.K., 2016; Gupta et al., 2013). The discovery that simple feeding of a simple organic compound (the polyamine spermidine) can extend lifespan and improve cognition(Gupta et al., 2013) recently led to an interventional phase II clinical trial in elderly humans. The project will investigate the synaptic basis of age-induced memory impairment with a combination of STED microscopy, genetics and physiological approaches in two model organisms, Drosophila and mouse. It will thus span the way from basic research to the clinical domain, and promises to open a new avenue in searching for new therapeutic strategies to fight age-associated dementia, a major health thread of our times.


**Language requirements:**
IELTS: 6.5 or TOEFL: 95 iBT

**Academic requirements:**
Candidates are expected to hold a Masters Degree in Neuroscience, Biology, Biochemistry, Biomedicine or related subjects
Experience with imaging would be helpful but is not obligatory

**Information of the professor or research group leader (website, awards etc.):**
http://genetik.bcp.fu-berlin.de/
http://www.neurocure.de/

Stephan Sigrist
Since 2014 Einstein Professor
Since 2012 Spokesperson of the Collaborative Research Center 958 “Membrane Scaffolding”
Since 2009 Co-Director of the DFG Cluster of Excellence NeuroCure, Charité Universitätsmedizin Berlin, Germany
Since 2008 Full Professor (W3) in Genetics, Institute of Biology, Freie Universität Berlin, Germany

**Please Note:** In a first step, the complete application should be submitted to csc@international.fu-berlin.de for evaluation by January 4th, 2020. Please do not contact the professor before. He/she will get in contact with you after having received the complete application via the International Office of Freie Universität Berlin in January.