

Interdisciplinary Colloquium Regenerative Medicine I

Tuesday, 28 June 2016 at 12:30 – 1:30 pm
Nord 1, Kurszimmer C301,
University Hospital Zurich

Prof. Martin E. Schwab

Brain Research Institute, University of Zurich and ETH Zurich

Anti-Nogo on the go. From bench to bedside with a neurite growth enhancing therapy for spinal cord injury and stroke

Large spinal cord or brain injuries lead to life-long structural and functional deficits, but small lesions often have a good prognosis with extensive functional recovery; the underlying mechanisms are not well understood, however. Major changes in the neuronal wiring including formation of new circuits and maps were found after spinal cord lesions in adult rats. The membrane protein Nogo-A is a well characterized neurite growth inhibitor in the adult CNS. Nogo-A activates a RhoA cascade via two multisubunit receptor complexes. Function blocking antibodies against Nogo-A have been applied to rats and macaque monkeys with spinal cord injuries as well as animals with very large stroke lesions of the sensory-motor cortex. Antibodies against human Nogo-A are currently entering a Phase II European clinical trial for acute cervical spinal cord injury and a Phase I/II trial for stroke. An anti-Nogo receptor subunit antibody, anti-Lingo-1, has shown efficacy in MS trials.

Organiser: Prof. Dr. Dr. Simon P. Hoerstrup

Execution/Chair: Dr. Steffen M. Zeisberger

IREM & Wyss Zurich, Univ. of Zurich and ETH Zurich