



SELECTED PUBLICATIONS: *EMBO J* 25:1364, 2006; *Stem Cells* 27:2824, 2009; *Exp Neurol* 237:8, 2012; *Physiol Rev* 94:1077, 2014; *Exp Neurol* 253:154, 2012; *Acta Neuropathol* 131: 323, 2016; *Cereb Cortex* 27:3360, 2017; *Brain* 104:353, 2017; *Exp Neurol* 290:74, 2017; *Front Immunol* 12: 768198, 2021; *Cells* 10:1812, 2021; *Neurochem Res* 46:2626, 2021; *Prog Neurobiol* 229:102199, 2022; *J Clin Invest* 133:e162253, 2023; *Neuron* 113: 2102, 2025

CITED >16 000 times, h-index 51 (Google Scholar)

Improving stroke recovery – from transcriptomics to new treatment strategies

Professor Marcela Pekna, MD, PhD

Director of the Laboratory of Regenerative Neuroimmunology
Dept. of Clinical Neuroscience, Sahlgrenska Academy at the
University of Gothenburg, Sweden

September 5, 2025, 13.00-14.00

The Czech Academy of Sciences, Vestec, BIOCEV
building, Průmyslová 595, 2nd floor, U2.012 conference hall

Over the years, Marcela has identified novel functions of the complement system in neural plasticity, regeneration and responses of the brain in neurological diseases. The lecture will highlight recent findings from the Pekna laboratory that show how transcriptomics, neuroimaging and advanced animal models were used to gain insights into processes that control stroke-induced neurodegeneration and post-stroke recovery, and how this led to a new experimental treatment for stroke.



Astrocytes as major players in CNS diseases

Professor Milos Pekny, MD, PhD

Director of the Laboratory of Astrocyte Biology and CNS Regeneration

Dept. of Clinical Neuroscience, Sahlgrenska Academy at the
University of Gothenburg, Sweden

September 5, 2025, 14.00-15.00

The Czech Academy of Sciences, Vestec, BIOCEV
building, Průmyslová 595, 2nd floor, U2.012 conference hall

SELECTED PUBLICATIONS: *J Cell Biol* 145:503, 1999; *Nature Neurosci*, 6:863, 2003; *J Neurosci* 24:5016, 2004; *PNAS* 103:17513, 2006; *JCBFM* 28:468, 2008; *Nucl Acids Res* 39: e24, 2011; *Physiol Rev* 94:1077, 2014; *Curr Opin Cell Biol* 32:121, 2015; *Acta Neuropathol* 131: 323, 2016; *Cereb Cortex* 27:3360, 2017; *Cereb Cortex* 29:4050, 2019; *Nature Neurosci* 24:312, 2021; *Prog Neurobiol* 229:102199, 2022; *Genes & Devel* 36, 391, 2022; *J Clin Invest* 133:e162253, 2023; *Glia* 73: 57, 2025; *Neuron* 113: 2102, 2025

CITED >26 900 times, h-index 69 (Google Scholar)

Pekny laboratory focuses on the development of novel strategies for brain repair and regeneration. The lecture will highlight the specific roles of astrocytes in stroke and stroke-induced neurodegeneration, and discuss therapeutic strategies to promote functional recovery through the modulation of astrocytes.