
Laboratory of Neurodegenerative Disorders

Offer

- Tests of effects of chemical substances including pharmaceuticals on neural function
- Design of the experimental protocol
- Motor and behavioural tests in laboratory mice
- Analysis and statistical processing of the data
- Application of stem cells and chemical substances directly into mouse brain

Expertise

- Laboratory of neurodegenerative disorders is focused on investigation of cerebellar degenerations.
- Functional impacts of cerebellar damage on motor function as well as cognitive and emotional processes are studied in several mouse models of hereditary cerebellar degeneration.
- The next research area is investigation of experimental neurotransplantation and regenerative therapy of neurodegenerative diseases.
- This research includes *in vitro* and *in vivo* studies of the effect of trophic and morphogenetic factors on proliferation and development of neural stem cells.

Members

- Assoc. Prof. Jan Cendelín, M.D., Ph.D. – Research Group Leader
- Jiřina Babická, M.Sc.
- Filip Tichánek, M.Sc.
- Jan Tůma, Ph.D., MSc.
- Assoc. Prof. František Vožeh, M.D., Ph.D.

Cost action membership

- BM0901 – European systems genetics network for the study of complex genetic human diseases using mouse genetic reference populations (SYSGENET)
- BM1001 – Brain Extracellular Matrix in Health and Disease (ECMNet)

Selected Publications

- Babuska V, Houdek Z, Tuma J, Purkartova Z, Tumova J, Kralickova M, Vožeh F, Cendelin J.: *Transplantation of Embryonic Cerebellar Grafts Improves Gait Parameters in Ataxic Lurcher Mice*. *Cerebellum*: in press
- Kolinko Y., Krakorova K., Cendelin J., Tonar Z., Kralickova M.: *Microcirculation of the brain: morphological assessment in degenerative diseases and restoration processes*. *Rev Neurosci* 26: 75–93, 2015
- Cendelin J., Tuma J., Korelusova I., Vožeh F.: *The effect of genetic background on behavioral manifestation of Grid2Lc mutation*. *Behav Brain Res* 271: 218–227, 2014
- Cendelin J.: *From mice to men: lessons from mutant ataxic mice*. *Cerebellum & Ataxias* 1: 4, 2014
- Purkartova Z., Tuma J., Pesta M., Kulda V., Hajkova L., Sebesta O., Vožeh F., Cendelin J.: *Morphological analysis of embryonic cerebellar grafts in SCA2 mice*. *Neurosci Lett* 558: 154–158, 2014
- Cedikova M, Houdek Z, Babuska V, Kulda V, Vožeh F, Zech N., et al.: *Fate of two types of cerebellar graft in wild type and cerebellar mutant mice*. *J Appl Biomed* 12: 17–23, 2014

Are you interested in this expertise?

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Experts and their Department

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