IMG

Institute of Molecular Genetics
of the Czech Academy of Sciences

Regular Wednesday IMG seminar

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Laboratory of Genome Dynamics

"Deciphering PNKP Functions in Neurological Disorders"

Hereditary mutations in polynucleotide kinase-phosphatase (PNKP), a key enzyme in DNA strand break repair, result in a broad spectrum of neurological disorders, ranging from mild neurodegeneration to severe neurodevelopmental defects. PNKP has dual phosphatase and kinase activities essential for DNA break repair, but their specific contributions to preventing neuropathology remains unclear. In this seminar, we will present findings from mouse genetic models that highlight the crucial role of the PNKP phosphatase domain in neurodevelopment. Additionally, we will introduce a novel cell-based system to investigate the immediate effects of acute PNKP depletion and explore how this model helps identify key sources of DNA damage and the molecular mechanisms underlying PNKP-related disease pathology.

The seminar will be held

on Wednesday 16th April 2025 at 15:00

in the Milan Hašek Auditorium at IMG

(Institute of Molecular Genetics of the Czech Academy of Sciences, Vídeňská 1083, Prague 4)