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Psychiatry and Neuroscience Seminar Series 2024

Pr Martin Horák

(Host C Hanus/Z Lenkei)
Institute of Experimental Medicine of CAS, Prague, Czech Republic

Investigation of early transport of NMDA receptors by pathogenic variants in extracellular domains of GluN subunits and their pharmacological modulation by novel open-channel blockers

Friday, November 8th, 2024, noon

Room D Levy, 102-108 rue de la santé - 75014 Paris

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The Department of Neurochemistry was established in 2018 to conduct cutting-edge research in regulating N-methyl-D-aspartate (NMDA) receptors in mammalian neurons under normal and pathological conditions. Specifically, we study the molecular mechanisms that regulate the surface numbers of NMDA receptors, including their maturation in the endoplasmic reticulum and transport across the Golgi apparatus, and the surface mobility and localization of NMDA receptors in synaptic and extrasynaptic regions of mammalian neurons. We are also studying the functional impact of selected pathogenic variants in genes encoding GluN subunits of NMDA receptors associated with developing epilepsy and other neurological diseases and developing pharmacological modulators of NMDA receptors with unique mechanisms of action. Our results contribute to the understanding and future therapy of disorders associated with abnormal regulation of NMDA receptors, including, for example, epilepsy and Alzheimer's disease.

Keywords:

Channel inhibiter, Glutamate receptor, Glycosylation, Excitatory synapse, Posttranslational modification

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