

CEIPEX MU TOPIC 11

Položka / Field	Obsah / Content
NAME	Assoc. Prof. Alena Salasova, PhD
CEIPEX RESEARCH TOPIC LEVEL2	Brain & Mind Research:
NAME OF THE RESEARCH GROUP	Developmental Neuroscience
TOPIC	Tracing Brain Disease Back to Developmental Decisions
ABSTRACT	Emerging evidence links early developmental dysregulation to increased risk of neuropsychiatric and neurodegenerative diseases, including ADHD and Parkinson's disease. Yet, the mechanisms driving this convergence remain poorly understood. Our overarching goal is to define how neuronal and glial populations establish their identity, connectivity, and structural integrity during prenatal and postnatal nervous system development, and how disruptions in these processes confer long-term susceptibility to stress and disease. More specifically, we investigate how molecular programmes and cellular communication are established and executed during neurodevelopment, focusing especially on dopaminergic neurons and psychomotor circuits. We integrate genetically modified mouse models, cellular systems, biochemistry, advanced imaging, and multi-OMIC approaches. Current projects explore the developmental functions of disease-associated proteins and how their early dysregulation predisposes specific neuronal populations to disease. Ultimately, we aim to uncover previously overlooked cellular and molecular mechanisms driving the onset of neuropsychiatric and neurodegenerative disorders.
WEBPAGE OF THE RESEARCH GROUP/CONTACT	https://www.muni.cz/lide/222812-alena-salasova