Croatian Science Foundation Research project (IP-2022-10-8493)

Uniqueness in the development of interneurons in the human prefrontal cortex during fetal life and first postnatal year – implications in the pathogenesis of schizophrenia and autism



WORKSHOP AND MINI-SYMPOSIUM Monday—Tuesday, September 15–16, 2025 University of Zagreb, School of Medicine



University of Zagreb, School of Medicine Croatian Institute for Brain Research

Monday, September 15

10:00–14:00 – Workshop (Laboratory for Immunohistochemistry)

RNAscope in situ hybridization in the developing monkey and human brain (Gavin Clowry, Zdravko Petanjek, Nataša Jovanov Milošević)

15:30–19:00 – Mini-Symposium (Seminar Room 2 – First Floor)

15:30-16:45 - Invited Lectures

Evolution and developmental origins of human cortical GABAergic neurons
(Gavin Clowry, Newcastle University Biosciences Institute and Centre for Transformative Neuroscience,
Newcastle upon Tyne, United Kingdom)

Evolution of striatal calretinin interneurons in primates: opioid receptor, complex cognitive functioning and schizophrenia (Istvan Adorjan, Department of Anatomy, Histology and Embryology, Semmelweis University, Budapest, Hungary)

Short Presentations of Preliminary Results

16:45-17:00

Regional differences in molecular and structural features of GABAergic neurons in the adult human frontal cortex (Ivan Banovac)

• 17:00-17:15

GABAergic network and microcircuit specialization in the adult human anterior cingulate cortex (Matija Vid Prkačin)

• 17:15-17:30

The sublamination of human cortical layer I indicates a complex and unique neuronal structure (Maura Zanze Beader)

• 17:30-17:45

Postnatal transformation of human cortical layer I: transient fetal features and the adult phenotype in early infancy (Marina Čavka)

• 17:45-18:00

Glycosylation Signatures of Proteoglycans Shape Fetal Cerebral Cortex Organization (Ivona Kirchbaum)

18:00-18:15

Cortical tubers in tuberous sclerosis complex show preservation of molecular structure (Tin Luka Petanjek)

• 18:15-18:30

Developmental roots of the neural phenotype in high-grade brain gliomas (Joško Bilandžić)

18:30-19:30 - Round Table

Evolutionary specialization of the GABAergic network in the human prefrontal cortex: the role of unique development in human-specific neuropathology (Zdravko Petanjek, Nataša Jovanov Milošević, Ana Hladnik)

Tuesday, September 16

10:00–13:00 – Workshop (Laboratory for Immunohistochemistry)

Immunohistochemistry on surgically removed brain tissue (Gavin Clowry, Nataša Jovanov Milošević)