FOR 2795 Meeting in Bochum

"Synapses under Stress"

May 8th, 2025

Beckmanns Hof, Ruhr-Universität Bochum

10:00 Arrival, Coffee

10:30 Opening Remarks (Prof. Dr. Christine Rose, Prof. Dr. Christoph Fahlke)

10:40 Keynote Talk

Dr. Raul E. Guzman (FZ Jülich):

Cl^-/H^+ exchangers regulate neuronal excitability by tuning Kv7/KCNQ and Kv1 channel density: Implications for pathological conditions

11:30 Project Talks I

A. Hannah van Susteren (U Twente, Meijer/van Putten Groups):

Synaptic transmission during ischemia and recovery: a biophysical model including the complete glutamate-glutamine cycle

B. Dr. Nils Pape (HHU Düsseldorf, Rose Lab):

TRPV4 channels mediate Na+ influx and promote cellular ATP loss during energy deprivation in mouse cortex

C. Dr. Rita Frank (U Szeged):

Brain tissue edema reduction and neuroprotection: in vitro effects of mannitol and TRPV channel antagonism

D. Julius Körber (FZ Jülich, Fahlke Lab):

Chloride homeostasis of cortical neurons under transient ischemic stress

12:30 Discussion I

Ion homeostasis and cellular function in metabolic stress conditions: *What have we learned? What are emerging questions?* (Chair: C. Henneberger)

13:00 Lunch Break, Group Picture

14:00 Project Talks II

E. Prof. Dr. Eszter Farkas (U Szeged):

Nimodipine reduces microglial activation in vitro as evidenced by morphological phenotype, phagocytic activity and bulk RNA sequencing

F. Prof. Dr. Christian Henneberger (U Bonn):

Functional coupling of glutamate uptake and glycine release: Implications for metabolic stress

G. German Lauer (RU Bochum, Reiner Lab):

Glutamate, neuronal depolarization and possible contributions of TRPM4 to chemical ischemia

H. Dr. Ruchika Anand (HHU Düsseldorf):

Mitochondrial remodeling in response to hypoxia and cellular stress

15:00 Coffee Break

15:30 Discussion II

Ion homeostasis and cellular function in metabolic stress conditions: *Future directions?* (Chair: C. Rose)

16:00 Final remarks

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"Early Career Networking & Social Event"

16:15-evening in Bochum; for all PhD and Postdocs working in FOR2795 projects

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Location/Directions

Beckmanns Hof, Ruhr-Universität Bochum

By Car

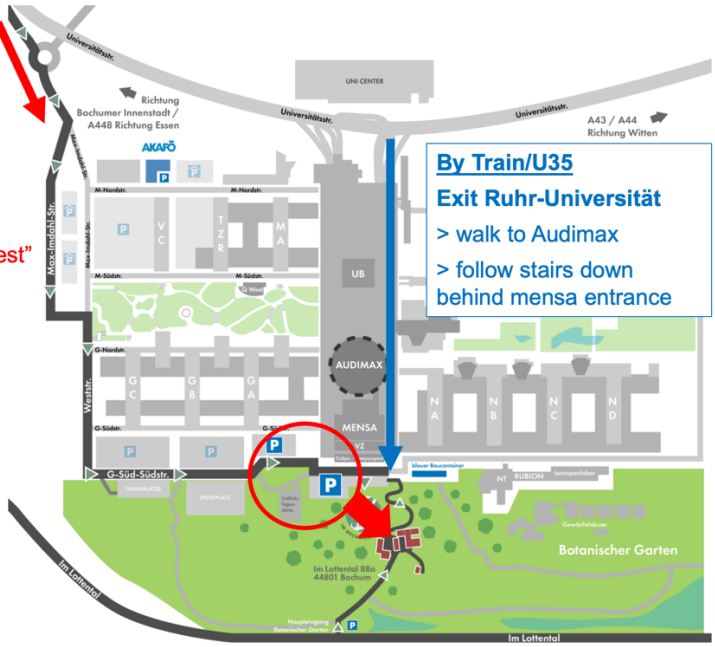
Exit Universitätstraße

„Ruhr-Universität West, Gesundheitscampus“

Exit Circle „Ruhr Universität West”

> Max-Imdahl-Straße

> Weststraße

> G-Süd-Südstraße

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