

Brain Dynamics Graduate School



Newsletter – October ‘24

*Let us know if you have an announcement, upcoming event, new publication or job posting!
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<https://lists.uni-leipzig.de/mailman/listinfo/neuroscience>

Events

- **Open Science Initiative**

07.10. 15:00 Hybrid, online & MPI CBS, Lecture Hall, Stephanstraße 1A, 04103 Leipzig

Prof Richard McElreath, PhD, Department of Human Behavior, Ecology, and Culture, Max Planck Institute for Evolutionary Anthropology, Leipzig

“Rethinking Scientific Workflow”.

<https://www.cbs.mpg.de/events/38977/338738>.

- **Advanced EEG Workshop**

23-24.10. 09:30 –15:30 Villa Tillmanns, Room 04 (Foyer Mitte), Wächterstraße 30, 04107 Leipzig

Dr Mareike Daeglau, School of Medicine and Health Sciences, Carl von Ossietzky University of Oldenburg & **Jakab Pillaszanovich**, Institute of Biology, Faculty of Life Sciences, Leipzig University

<https://www.uni-leipzig.de/en/event-detail/event/advanced-eeeg-workshop>.

- **Brain Dynamics Seminar Series**

25.10. 12:00 Paul Flechsig Institute - Center of Neuropathology and Brain Research, Room 3093, Liebigstraße 19 (Haus C), 04103 Leipzig

Prof Dr Johannes Hirrlinger, Carl Ludwig Institute of Physiology, Faculty of Medicine, Leipzig University & Department of Neurogenetics, Max Planck Institute for Multidisciplinary Sciences, Göttingen

“Assessing dynamics of brain metabolism using genetically encoded fluorescent nanosensors”.

<https://www.uni-leipzig.de/en/brain-dynamics/graduate-school-brain-dynamics/news-events#c621679>.

News

- **The third Brain Dynamics Scientific Day held on 24th September**

The third annual meeting of the Brain Dynamics Graduate School gathered more than 60 scientists for the day of oral and poster presentations:

<https://www.uni-leipzig.de/en/brain-dynamics/graduate-school-brain-dynamics/news-events/newsdetail/artikel/brain-dynamics-scientific-day-held-on-24th-september-2024-10-02>

- **Call for Inter-Lab Pilot Projects open until 20th October**

The Inter-lab Pilot Project program offers funding in the amount of up to 3.500€ to support multi-lab, multidisciplinary pilot projects in humans and/or animal models. The objective of the Pilot Project program is to enable Brain Dynamics members to collect and/or analyse preliminary data in preparation for grant applications to local, national and international funding agencies.

<https://www.uni-leipzig.de/en/brain-dynamics/graduate-school-brain-dynamics/news-events/pilot-projects>

New member

We welcome one new doctoral student to the Brain Dynamics family:

➤ **Jessica Kromp**

Research Group Thum, Institute of Biology, Faculty of Life Sciences

Research project: “Local search behavior in *Drosophila* larvae”

<https://www.lw.uni-leipzig.de/en/institut-fuer-biologie/abteilungen/genetik/prof-thum-verhaltensneurogenetik>

Latest publications

- Brain Dynamics doctoral candidate **Toni Kirmann** and research group **Hallermann**

LGI₁ Autoantibodies Enhance Synaptic Transmission by Presynaptic K_v1 Loss and Increased Action Potential Broadening.

Ritzau-Jost A, Gsell F, Sell J, Sachs S, Montanaro J, Kirmann T, Maaß S, Irani SR, Werner C, Geis C, Sauer M, Shigemoto R, Hallermann S.

Neurol Neuroimmunol Neuroinflamm. 2024 Sep; 11(5): e200284. doi: 10.1212/NXI.0000000000200284.

- Brain Dynamics doctoral candidate **Christopher Wolff**, postdoc **Luise Hochmuth** and research group **Hirrlinger**

Insulin and leptin acutely modulate the energy metabolism of primary hypothalamic and cortical astrocytes.

Wolff C, John D, Winkler U, Hochmuth L, Hirrlinger J, Köhler S.
J Neurochem. 2024 Aug 22. doi: 10.1111/jnc.16211.

- Research group **Bergner**

BCAS₁-positive oligodendrocytes enable efficient cortical remyelination in multiple sclerosis.

Bergner CG, van der Meer F, Franz J, Vakrakou A, Würfel T, Nessler S, Schäfer L, Nau-Gietz C, Winkler A, Lagumersindez-Denis N, Wrzos C, Damkou IA, Sergiou C, Schultz V, Knauer C, Metz I, Bahn E, Rodriguez EG, Merkler D, Simons M, Stadelmann C.

Brain. 2024 Sep 25: awae293. doi: 10.1093/brain/awae293.

- Research group **Exner**

Once in Contact, Forever Contaminated! Introducing a Clinically Validated Imagery- and Video-Based Chain of Contagion Task for the Measurement of Disgust and Contamination Change in Experimental Research and Clinical Practice.

Fink-Lamotte J, Bieber H, Jordan H, Exner C.
Behav Ther. 2024 Sep; 55(5):1043-1058. doi: 10.1016/j.beth.2024.03.002.

- Research group **Fledrich**

Myelinated peripheral axons are more vulnerable to mechanical trauma in a model of enlarged axonal diameters.

Gargareta VI, Berghoff SA, Krauter D, Hümmert S, Marshall-Phelps KLH, Möbius W, Nave KA, Fledrich R, Werner HB, Eichel-Vogel MA.

Glia. 2024 Sep; 72(9):1572-1589. doi: 10.1002/glia.24568.

➤ Research group **Grosse Wiesmann**

An fMRI study on alexithymia and affective state recognition in the Reading the Mind in the Eyes Test.

Gosch S, Puhmann LMC, Lauckner ME, Förster K, Kanske P, Wiesmann CG, Preckel K. *Soc Cogn Affect Neurosci*. 2024 Sep 27; 19(1):nsae058. doi: 10.1093/scan/nsae058.

➤ Research group **Hartwigsen**

Quantification of subject motion during TMS via pulsewise coil displacement.

Numssen O, Martin S, Williams K, Knösche TR, Hartwigsen G. *Brain Stimul*. 2024 Aug 28; 17(5):1045-1047. doi: 10.1016/j.brs.2024.08.009.

➤ Research group **Hirrlinger**

Oligodendroglial fatty acid metabolism as a central nervous system energy reserve.

Asadollahi E, Trevisiol A, Saab AS, Looser ZJ, Dibaj P, Ebrahimi R, Kusch K, Ruhwedel T, Möbius W, Jahn O, Lee JY, Don AS, Khalil MA, Hiller K, Baes M, Weber B, Abel ED, Ballabio A, Popko B, Kassmann CM, Ehrenreich H, Hirrlinger J, Nave KA. *Nat Neurosci*. 2024 Sep 9. doi: 10.1038/s41593-024-01749-6.

➤ Research groups **Michalski / Roßner**

Focal Cerebral Ischemia Induces Expression of Glutaminyl Cyclase along with Downstream Molecular and Cellular Inflammatory Responses.

Höfling C, Ulrich L, Burghardt S, Donkersloot P, Opitz M, Geissler S, Schilling S, Cynis H, Michalski D, Roßner S. *Cells*. 2024 Aug 23; 13(17):1412. doi: 10.3390/cells13171412.

Dipeptidyl peptidase 4 deficiency improves survival after focal cerebral ischemia in mice and ameliorates microglia activation and specific inflammatory markers.

Höfling C, Donkersloot P, Ulrich L, Burghardt S, Opitz M, Geissler S, Schilling S, Cynis H, Michalski D, Roßner S. *Neurobiol Dis*. 2024 Sep 16; 201:106671. doi: 10.1016/j.nbd.2024.106671.

➤ Research group **Simon**

The systemic complexity of a monogenic disease: the molecular network of spinal muscular atrophy.

Tapken I, Schweitzer T, Paganin M, Schüning T, Detering NT, Sharma G, Niesert M, Saffari A, Kuhn D, Glynn A, Cieri F, Santonicola P, Cannet C, Gerstner F, Faller KME, Huang YT, Kothary R, Gillingwater TH, Di Schiavi E, Simon CM, Hensel N, Ziegler A, Viero G, Pich A, Claus P. *Brain*. 2024 Aug 26: awae272. doi: 10.1093/brain/awae272.

➤ Research group **Valk**

Relating sex-bias in human cortical and hippocampal microstructure to sex hormones.

Küchenhoff S, Bayrak Ş, Zsido RG, Saberi A, Bernhardt BC, Weis S, Schaare HL, Sacher J, Eickhoff S, Valk SL.

Nat Commun. 2024 Aug 23; 15(1):7279. doi: 10.1038/s41467-024-51459-7.

Differential increase of hippocampal subfield volume after socio-affective mental training relates to reductions in diurnal cortisol.

Valk SL, Engert V, Puhlmann L, Linz R, Caldairou B, Bernasconi A, Bernasconi N, Bernhardt BC, Singer T.

Elife. 2024 Aug 28; 12:RP87634. doi: 10.7554/eLife.87634.

Sex differences in functional cortical organization reflect differences in network topology rather than cortical morphometry.

Serio B, Hettwer MD, Wiersch L, Bignardi G, Sacher J, Weis S, Eickhoff SB, Valk SL.

Nat Commun. 2024 Sep 4; 15(1):7714. doi: 10.1038/s41467-024-51942-1.