

ZNZ PhD Retreat 22, Clinic Valens 9 – 11 June 2022

Program (Version 9 June 22)

Thursday, 9 June

- 17:00 – 19:00 **Short Talks on PhD Research Projects, Part I**, short break/drinks at 18:00, 7 talks
- 19:00 – 19:45 **Brain reading: Principles and limitations of decoding mental states from brain activity**
Plenary Talk by Prof. John-Dylan Haynes, Bernstein Center for Comp. Neuroscience, Berlin
- 20:00 Dinner (Hotelhalle)

Friday, 10 June

- 08:00 – 9:00 Breakfast (Hotelhalle)
- 09:00 – 12:00 **Short Talks on PhD Research Projects, Part II**, coffee break at 10:15, 10 talks
- 12:00 – 13:00 **Patient Presentations** by Dr. Roman Gonzenbach, Clinic Valens
- 13:00 – 14:00 Lunch (Hotelhalle)
- 14:00 – 14:45 **Guided Tour through the Neurorehabilitation Clinic**
- 14:45 – 17:00 **Poster Session**, coffee at 16:00, 34 posters
- 17:00 – 17:45 **From neurophysiology to neurorehabilitation: Insights from multimodal neuroimaging**
Plenary Talk by Prof. Charlotte Stagg, University of Oxford, UK
- 19:00 Extra Bus leaving Clinic Valens for dinner at “Altes Bad Pfäfers”

Saturday, 11 June

- 08:00 – 9:00 Breakfast (Hotelhalle)
- 09:00 – 12:00 **Short Talks on PhD Research Projects, Part III**, coffee at 10:30, 10 talks
- 12:00 – 12:30 **Feedback on the ZNZ PhD Program in Neuroscience**
- 12.30 Lunch box (Zinn Saal)
- 12:58 Public bus to Bad Ragaz

Short Talks on Ph.D. Research Projects:

(10 minutes talk and five minutes discussion)

Part I, Thursday, 17:00 – 19:00

1. Miriam Kretschmer, Institute for Neuroscience, ETH

[The role of glucocorticoid receptors during haploid spermiogenesis and paternal signal transmission](#)

2. Chenfeng Zhang, Department of Psychiatry, Psychotherapy and Psychosomatics, PUK

[Chronic social stress-induced impaired reward responding co-occurs with specific deficits in nucleus accumbens dopamine release in mice](#)

3. Johanna Furrer, Institute of Pharmacology and Toxicology, UZH

[The Role of astrocytes in postnatal synaptic refinement of the medial prefrontal cortex](#)

4. Jacqueline Condrau, Institute of Pharmacology and Toxicology, UZH

[Blood flow dynamics and tissue oxygenation of the murine brain](#)

5. Marilia Sousa, Institute of Pharmacology and Toxicology, UZH

[Functional and Anatomical Characterization of Serotonergic Projection Neurons of the RVM](#)

6. Camilla Beccarini, Institute of Pharmacology and Toxicology, UZH

[Characterization of translational changes in spinal cells after peripheral nerve injury](#)

7. Raquel Mendes, Institute of Pharmacology and Toxicology, UZH

[Visualization of GRP and GRPR neurons activation in the spinal cord](#)

Part II, Friday, 9:00 – 12:00

8. Matteo Ranucci, Institute of Pharmacology and Toxicology, UZH

[Serotonin, GABA and Glycine co-transmission in the spinal cord](#)

9. Sandesh Neupane, Institute of Neuropathology, USZ

[High-throughput whole genome-wide CRISPR activation screening for the identification of potential modifiers of alpha-synuclein aggregates](#)

10. Dalila Laura Vena, Institute of Neuropathology, USZ

[CRISPR screens to identify modulators of phagocytosis in AD](#)

11. Chiara Trevisan, Institute of Neuropathology, USZ

[Arrayed CRISPR screen to identify genetic modulator of PrPc expression](#)

12. Davide Caredio, Institute of Neuropathology, USZ

[High resolution single cell transcriptional and anatomical analysis in prion disease](#)

13. Kevin Maggi, Institute of Medical Molecular Genetics, UZH

[Molecular basis of Norrie Disease and related disorders](#)

14. Cinzia Maschio, Institute for Regenerative Medicine, UZH

[Novel imaging biomarker and neurostimulation in Alzheimer's Disease](#)

15. Dario Bachmann, Institute for Regenerative Medicine, UZH

[The contribution of lifestyle to resistance and resilience to Alzheimer's disease and its mechanistic underpinnings](#)

16. Laura Schnider, Institute of Pharmacology and Toxicology, UZH

[Pharmacological sleep enhancement in human subjects](#)

17. Giovanna Aiello, D-HEST, ETH

[Brain dynamics modulation via invasive and non-invasive stimulation in refractory epilepsy](#)

Part III, Saturday, 9:00 – 12:00

18. Natalie Monet Walter, Institute of Child and Adolescent Psychiatry and Psychotherapy, PUK
Elucidating the functional effects of Omega-3 fatty acids with and without methylphenidate as a treatment in ADHD
19. Carole-Anne Vollette, Vestibulo-Oculomotor Lab, USZ
A wearable-based system to reduce space motion sickness by multisensory pre-habituation
20. Gaizka Goikoetxea Sotelo, D-HEST, ETH and University Children's Hospital Zurich
Intensity of interactive-computer-play-based upper limb rehabilitation in children with neurological disorders: the influence of motivation and game design
21. Plamina Dimanova, Jacobs Center for Productive Youth Development, UZH
Intergenerational transfer effects on socioemotional and cognitive brain development
22. Ella McPherson, Institute of Psychology, UZH
Investigating resilience and stress in medical students
23. Eduarda Streit Morsch, Institute for Neuroinformatics, UZH/ETH
Neural dynamics underlying social transmission of social behavior
24. Reinhard Loidl, Institute for Neuroinformatics, UZH/ETH
Intracellular representations of feedback signals during neuronal activity and plasticity
25. Alexander Meulemans, Institute for Neuroinformatics, UZH/ETH
Credit assignment in artificial and biological neural networks
26. Brian McCreynolds, Institute for Neuroinformatics, UZH/ETH
Scientific and space-based applications of neuromorphic, event-based cameras
27. Shyam Narayanan, Institute for Neuroinformatics, UZH/ETH
Bio-inspired wide band signal processing for extreme edge neuromorphic computing

Posters, Friday, 14:45 – 17:00

Even poster numbers: presenters are at poster 14:45 – 15:50

Odd poster numbers: presenters are at poster 15:50 – 17:00

Format: A0 Portrait, i.e. height x width: 1189 x 841 mm. Pins/tape will be available.

P01 Diana Machado, Brain Research Institute, UZH

Keep them quiet – elucidating a role for MLC1 in mouse and human neural stem cell behavior

P02 Elkhan Yusifov, Dep. of Molecular Life Sciences, UZH

Investigating the role of primary cilia in neural circuit formation

P03 Natalia Crus-Ochoa, Brain Research Institute, UZH

Rewiring of CA1 and CA3 pyramidal cells in the adult mouse brain

P04 Sarah Wicki, Department of Psychiatry, Psychotherapy and Psychosomatics, PUK

Development of prefrontal cortex and executive functions in mice: identification of critical periods and the importance of social interaction

- P05 Michael Müller, Institute for Neuroscience, ETH
Modulating biological reactivity following serotonergic stimulation with N.N. -Dimethyltryptamin (DMT) and hamine in healthy subjects
- P06 Mahshid Gazorpak, Institute for Neuroscience, ETH
IStudy on the effects of glucocorticoid receptor depletion using Proteolysis targeting chimeras (PROTACs)
- P07 Leonard Steg, Brain Research Institute, UZH
Influence of the paternal epigenome on the developing embryo: Implications for epigenetic inheritance
- P08 Jan Demic, Institute of Pharmacology and Toxicology, UZH
Development of genetically encoded sensors for in vivo fluorescence lifetime imaging of neuroenergetics and neuromodulation
- P09 Zacharoula Kagiampaki-Baimpaki, Institute of Pharmacology and Toxicology, UZH
A new green norepinephrine sensor for in vivo imaging
- P10 Henri Zanker, Institute of Pharmacology and Toxicology, UZH
Functional metabolic imaging of oligodendrocytes and the white matter
- P11 Urvashi Dalvi, Institute of Pharmacology and Toxicology, UZH
Role of oligodendroglial ROS in axon-glia metabolic coupling
- P12 Rachel Meister, Institute of Pharmacology and Toxicology, UZH
How the ketogenic diet and ketone bodies affect energy metabolism in brain cells
- P13 Francesca Pietrafesa, Institute of Pharmacology and Toxicology, UZH
Tbd.
- P14 Stefano Sellitto, Institute of Neuropathology, USZ
Investigate the genetic and molecular landscape of the hnRNP K cellular essentiality by performing unbiased CRISPR screens
- P15 Longping Yao, Institute of Neuropathology, USZ
Neuroinflammation in prion infection
- P16 Jiayu Wu, Institute of Medical Genetics, UZH
Improving diagnostic yield in epileptic encephalopathy by functional assessment of non-coding DNA variants in patient iPSC derived neurons.
- P17 Simon Schading, Center for Paraplegia, Balgrist University Hospital
Quantitative and functional MRI investigation of neurodegeneration associated with spinal cord injury across the neuraxis
- P18 Tim Emmenegger, Center for Paraplegia, Balgrist University Hospital
Development and application of quantitative MRI processing tools to track structural and functional changes along the neuraxis following spinal cord injury
- P19 Artur Luzgin, Inst. of Pharmacology and Toxicology, UZH and Inst. for Biomed. Engineering, ETH
Multiscale and multimodal imaging in Alzheimer's disease
- P20 Najmeh Kheram, Institute of Physiology, UZH
Analysis of cerebrospinal fluid pressure in spinal cord compression
- P21 Anna Speckert, Center for MR Research, University Children's Hospital Zurich
Structural basis of mild developmental delay in the developing human brain connectome
- P22 Jeanne Droux, Clinic for Neurology, USZ
Understanding the mechanisms behind capillary stalls in ischemic stroke

P23 Nora-Hjördis Moser, Clinic for Neurology, USZ

[Can Parkinson's patients benefit from targeted memory reactivation during rehabilitation?](#)

P25 Nico Ehrhardt, Department of Child and Adolescent Psychiatry and Psychotherapy, PUK

[Functional links between multisensory processes and developmental language disorder](#)

P26 Dawid Strzelczyk, Institute of Psychology, UZH

[Neurophysiological markers of successful learning in healthy aging](#)

P27 Lukas Sempach, Faculty of Psychology, University Psychiatric Clinic Basel and Faculty of Medicine, University of Basel

[Clinical and neural treatment effects in depression](#)

P28 Tomas Tomka, Institute for Neuroinformatics, UZH/ETH

[Densely-resolved vocal communication in songbirds](#)

P29 Newsha Ghasemi Nejad, Institute for Neuroinformatics, UZH/ETH

[The influence of deviating stimuli on perception and cortical representation in the mouse model](#)

P30 Reza Masloun, D-HEST, ETH and Department of Neuroradiology, USZ

[Voluntary control over attention using real-time fMRI neurofeedback \(rtfMRI-nf\)](#)

P32 Zuowen Wang, Institute for Neuroinformatics, UZH/ETH

[Memory and compute-efficient deep neural networks for visual processing](#)

P33 Maryada Maryada, Institute for Neuroinformatics, UZH/ETH

[Sensory gating via dis-inhibition](#)

P34 Flora Moujaes, Department of Psychology, UZH

[Comparing neural correlates of consciousness: from psychedelics to hypnosis and meditation](#)