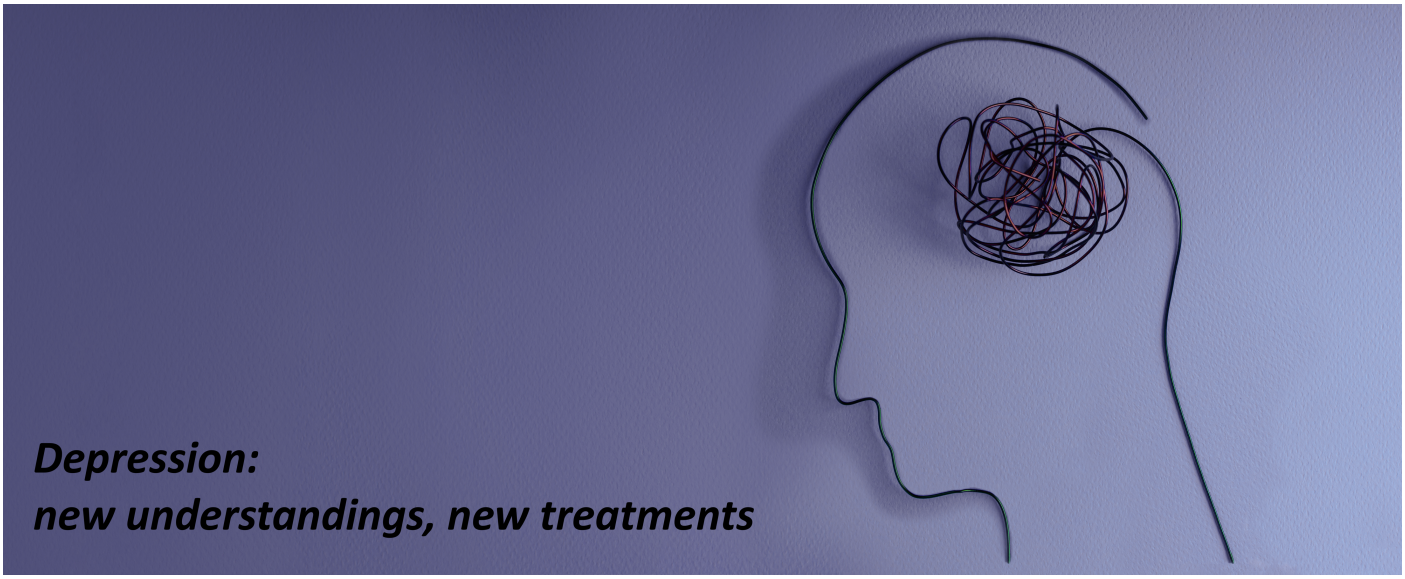
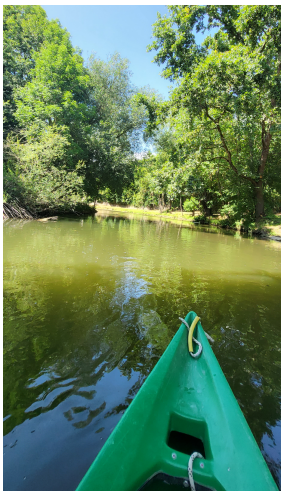
IZN Retreat 2026
Kloster Schöntal
June 22–23

IZN

Interdisziplinäres Zentrum für
Neurowissenschaften der
Ruprecht-Karls-Universität Heidelberg



Depression:
new understandings, new treatments



Retreat Program

Monday, June 22

Bus Departure	8:15	from the Bioquant (Heidelberg)	
Welcome Reception	**10:00**	Banquet hall	
Welcome Address	10:25	**Hilmar Bading** Managing Director of the IZN, Heidelberg University Heidelberg, Germany	
Introduction	10:40	**Florian Bähner** Central Institute of Mental Health Mannheim, Germany	
Session 1 Chair: Devika Jayakumar	10:55	**Fabian Streit** Central Institute of Mental Health Mannheim, Germany	*Using large-scale genetic data to investigate mental health*
Session 2 **"Poster Jam"** Chair: Anna Hertle	11:30	**Ruili Li** Spanagel Group	*Dorsal striatal PDE10A gates cocaine seeking by biasing action control away from perseverative responding*
		Ivan Skorodumov Meinhardt Group	*Oxa-noribogaine reduces alcohol drinking through aversion learning and by altering glutamatergic activity in the mPFC*
Lunch	**12:00**		
Free Time	**Canoeing** (meet at 13:15 at the parking lot next to the former train station) *or* **Walk 'n' Talk** *or* **Swimming in the Jagst** *or* **Guided tour through the monastery** (meet at 16:30 at the baroque staircase)		
Dinner	**18:00**		
Session 3 **Plenary Lecture** Chair: Amr Elgez	19:15	**Conor Liston** Weill Cornell Medicine Graduate School of Medical Sciences New York, New York, USA	*Probing and rescuing dysfunctional brain circuits in depression*
Posters & Drinks	**20:15**	Rooms 203, 204, 207, and the hallway	

Tuesday, June 23

Breakfast	**7:00**	*Please check out of your room prior to the first session, if possible.*	
Session 4 Chairs: Avi Adlakha and Salman Ahmand	8:50	**Sabine Herpertz** University Clinic Heidelberg Heidelberg, Germany	*Towards personalised psychotherapy for depression*
	9:35	**Martin Walter** University Clinic Jena Jena, Germany	*Biological augmentation of therapeutic interventions in treatment resistant depression*
Posters & Coffee	**10:10**	Rooms 203, 204, 207, and the hallway	
Session 5 Chair: Tamara Pöpping	11:15	**Stefan Reber** University Clinic Ulm Ulm, Germany	*Building resilience against psychosocial trauma: the role of "Old Friends"*
Meetings	11:50	Students' Meeting / Science Pub Quiz: Banquet Hall	
Lunch	**12:50**		
Session 6 Chairs: Ivan Skorodumov and Natalie Ludwig	14:15	**Alexander Sartorius** Central Institute of Mental Health Mannheim, Germany	*The basis of ECT*
	14:50	**Ulrike Vogelmann** Technical University Munich Munich, Germany	*The evolution of TMS for depression: from fundamentals to circuit-based targeting and novel protocols*
Group Picture	15:25	staircase in front of the church	
Coffee	**15:35**		
Awards Ceremony	16:05	**IZN Students' Poster Prize** *Recipient TBA* Laudatio: Greta Visintin **Foundation BrainAid/IZN Master Thesis Award** *Linda Lobermeier* (Bading Group) Laudatio: Christoph Schuster **IZN/Chica and Heinz Schaller Young Investigator Neuroscience Award** *Ram Dereddi* (Agarwal Group) Laudatio: Ana Oliveira **Neuroscience Art Contest Winner** *Recipient TBA* Laudatio: Antje König	
Closing Remarks	16:30	**Hilmar Bading** Managing Director of the IZN, Heidelberg University Heidelberg, Germany	
Bus Departure	17:00	from the parking lot next to the train station	

Poster Presentations

Nr.	Authors	Group	Title
1	**Jemima Helen**, Stephanie Schimmer, Ferdinand Althammer, Valery Grinevich	Althammer	Brainwide mapping of hypothalamic projections and oxytocin neuron overlap using BARSeq in WT rats
2	**Inês Afonso**, David V. C. Brito, Carolina Martinheira, Anna M. H. Hertle, Hilmar Bading, Clévio Nóbrega	Bading	Targeting activity-induced inhibitors of death genes in spinocerebellar ataxia types 2 and 3
3	**Yu Chen**, Yumeng Wang, Andrea Hellwig, Anna M. Hagenston, Richard Fairless, Hilmar Bading	Bading	NMDAR/TRPM4 disruption rescues retinal ganglion cells and retinal mitochondria in glaucoma
4	**Aisha Ravenhorst**, Anna M. H. Hertle, Hilmar Bading	Bading	Genetic disruption of the interaction between NR2B-containing NMDARs and TRPM4 protects against excitotoxicity
5	**Tian Yuan**, C. Peter Bengtson, Hilmar Bading	Bading	Functional coupling of NMDAR and TRPM4 contributes to NMDA-induced excitotoxicity
6	**Lisa Wolters, Melina Fagogenis**, Felix Schumacher, Lucie Lenoel, Femke Groeneweg, Marcin Luzarowski, Christian Schultz, Nina Bonekamp	Bonekamp	Differential resilience of glioblastoma and neurons to progressive mitochondrial dysfunction
7	**Stefan Vintila**, Matthias Klumpp, Justus Simon, Andreas Draguhn, Martin Both	Both	Drift and stability in memory-related activity of hippocampal neurons in a spatial alternation task
8	**Rupsa Jana**, Ina Weidenfeld, Michael Breckwoldt	Breckwoldt	The mechanisms-of-action of various glioma immunotherapies are examined by *in vitro* multi-culture systems
9	**Yuxue Wang**, Ana Luiza Dias, Joseph Andrews Belo, Katja Lankisch, Tina Sackmann, Adriano B.L. Tort, Andreas Draguhn	Draguhn	Establishing a pipeline for studying respiration-coupled oscillations in pain-related states
10	**Jessica Friedrich**, Sarah K Williams, Babak Khodaie, Klemens Ruprecht, Oliver Kann, Richard Fairless	Fairless	Microglial activation correlates with hippocampal network dysfunction and cognitive impairment in EAE
11	**Antonella Daresta**, Lilly von Wiren, Eduard Maier, Valery Grinevich	Grinevich	Oxytocin receptor-mediated molecular regulation of tactile cortical plasticity during motherhood
12	**Charlotte Höger**, Quirin Krabichler	Grinevich	Probing the role of arginine vasopressin in pain using novel transgenic rat models
14	**Marc Fischer**, Oliver Gruber	Gruber	Neurofunctional correlates of anxious depression in the extended reward system
15	**Amr Elgez**, Andrea Lewen, Babak Khodaie, Lena Noack, Oliver Kann	Kann	Neural silencing and glucose supplementation attenuate inflammatory neurodegeneration
16	**Lena Noack**, Andrea Lewen, Amr Elgez, Babak Khodaie, Oliver Kann	Kann	Alterations in network function through microglial priming by IFNγ, peptidoglycan and LPS in rat hippocampal slice cultures
17	**Giulia Berguido**, Jaime Santos, Günter Kramer, Bernd Bukau	Kramer	Investigating the role of the newly identified co-translational KEAP1-APP interaction in APP biology and cell stress
18	**Avi Adlakha**, Ivo Sonntag, Simone Pfarr, Janet Barroso-Flores, Wolfgang Sommer, Thomas Kuner	Kuner	A dual-ensemble model of infralimbic cortex function in behavioural flexibility
19	**Rebekka Christle**, Thomas Kuner, Rohini Kuner, Nadja Bühler, Johannes Knabbe, Simone Hoppe, Yvette Dörflinger	Kuner	Tumor-nerve-interactions in pancreatic ductal adenocarcinoma
20	**Amrita Das Gupta**, Johannes Knabbe, Hongwei Zheng, Sanjeev Kaushalya, Jennifer John, Rohini Kuner, Thomas Kuner	Kuner	Multiscale correlation of structural plasticity in chronic pain
21	**Sanghun Lee**, Johannes Knabbe, Thomas Kuner	Kuner	Chronic pain and secondary motor cortex
22	**Esin Simge Güler**, Maria Irene Lois Bermejo, Xiaoyu Sun, Ana Martin-Villalba	Martin-Villalba	Assessing diversity of clonal barcodes in CRIPSR-based lineage tracing method
23	**Adriana Schneider**, Alexandra B. Merkel, Nunzio Perta, Lisa Ruff, Netta Ussyshkin, Paula Zimmer, Bahar Aksan, Laura D'Andrea, Silvia Pelucchi, Elena Marcello, Daniele Di Marino, Daniela Mauceri	Mauceri	Atp8a2 expression controls neuronal structural integrity and survival through phosphatidylserine regulation

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24	**Ivan Skorodumov**, Florian Walter, Merve Akan, Livia von Ammon, Tobias Buchborn, Yéléna Le Prieult, Esi Domi, Adana Keshishian, Marvin M Urban, Václav Havel, Liubov S. Kalinichenko, Christian P. Müller, Leah S Woods, Angela Beeson, Ravit Hadar, Ben Massuda, Maj Hildebrandt, Asude Z. Gül, Christine Winter, Roberto Ciccocioppo, Carsten Hopf, Rainer Spanagel, Dalibor Sames, Marcus Meinhardt	Meinhardt	Oxa-noribogaine reduces alcohol drinking through aversion learning and by altering glutamatergic activity in the mPFC
25	**Marvin Urban**, Lea Zillich, Nathalie Rieser, Marcus Herdener, Rainer Spanagel, Franz Vollenweider, Katrin Preller, Marcus Meinhardt	Meinhardt	Epigenome-wide association study of psilocybin-induced methylome changes in alcohol use disorder
26	**Reeya Bansal**, Barbara Di Marco, Javier Vázquez-Marín, Lázaro Centanin, Hannah Monyer	Monyer	Molecular basis of the interaction between neural stem cells and vascular filopodia in the developing brain
27	**Devika Ampili jayakumar**, Yu Chao Liu, Hannah Monyer	Monyer	Characterizing the calbindin positive septal projection to hippocampus
28	**Rebecca Uzzi**, Marcel Weinreich, Antonio Caputi, Cemile Kartal, Hannah Monyer	Monyer	From exploration to rest: Medial entohrinal cortex neurons integrate spatial and object information
29	**Monisha Chandrasekar**, Giacomo Novembre, Alessandro D'Ausilio, Trinh Nguyen	Nguyen	Investigating interpersonal neural synchrony and behavioral dynamics in social interactions
30	**Nekane Balcells Picaza**, Carmen Leibold, Franziska Mudlaff, Janina Kupke, Ana Oliveira	Oliveira	Function and regulation of de novo DNA methyltransferase DNMT3A1 in memory formation
31	**Carmen Leibold**, Nekane Balcells-Picaza, Franziska Mudlaff, Janina Kupke, Ana M.M. Oliveira	Oliveira	Revealing the kinases responsible for DNMT3A1 phosphorylation in response to neuronal activity
32	Violetta Scarpetta, **Sara Castria**, Chiara Salio, Marco Sassoè, Elena Marcello, Annarita Patriz	Patrizi	Sex-specific activation of choroid plexus macrophages in APP/PS1 mice
33	**Kaan Cilek**, Tiziana Cesetti, John Jbeily, Mario Vitacolonna, Mathias Hafner, Claudio Joazeiro, Rüdiger Rudolf	Rudolf	Differential effects of RQC mutations on hiPSC-derived neuromuscular cell types
34*	**Rüdiger Rudolf**, John Jbeily, Annamarija Raic, Mathias Hafner	Rudolf	Stage-resolved analysis of human iPSC-to-motoneuron differentiation shows a non-linear metabolic switch from glycolysis to oxidative phosphorylation with mitochondrial remodeling and anaplerosis
35*	**Mario Vitacolonna**, Rüdiger Rudolf, Tiziana Cesetti, John Jbeily	Rudolf	3D-based myogenesis and myotube morphometry analysis for functional screening of hIPSC-derived pre-myoblast differentiation
36	**Tamara Pöpping**, Andre Rupp	Rupp	Convolutional neural networks reveal differences in functional connectivity patterns under directed auditory attention
37	**Natalie Ludwig**, Patricia Sekol, Philipp S.L. Schäfer, Christian Riedl, Celia Lerma-Martin, Hilmar van Weering, Thomas Berger, Romana Höftberger, Bart Eggen, Denis Schapiro, Julio Saez-Rodriguez, Simon Hametner, Jovan Tanevski, Lucas Schirmer	Schirmer	Spatial multiome analysis identifies the perivascular niche as a central hub of early and expanding multiple sclerosis pathology
38	**Rangeet Manna, Thuy Linh Le Dac**, Duncan MacLaren, Magdalene Schlesiger	Schlesiger	Linking salience to memory: VTA dopamine shapes entorhinal spatial maps
39	**Irene Moscato, Duncan Archibald Allan MacLaren**, Thuy Linh Le Dac, Magdalene Isabell Schlesiger	Schlesiger	Mapping heterogeneous environmental features in the mouse entorhinal cortex
40	**Anushka Wakade**, Duncan MacLaren, Magdalene Schlesiger	Schlesiger	The role of entorhinal cortico-striatal projections in goal directed behavior
41	**Sophie Lucia Trender**, Joanna Stralka, Abishek Arora, Erdinc Sezgin	Sezgin	Biophysical modifications during trilineage differentiation of human induced pluripotent stem cells
42	**Nikolaus Gößl**, Amit Agarwal, Rangel Leal Silva	Silva	Astrocyte-mediated regulation of neuronal network dynamics through Gi-coupled signaling
43	**Gülcan Demir**, Francesco Giannone, Claudia Schaefer, Rainer Spanagel, Tobias Buchborn, Anita C Hansson	Spanagel	Early abstinence represents a critical window of enhanced psychedelic-like 5-HT_2A responsiveness during alcohol abstinence

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44	**Adeoye Ewedemi**, Marcus Meinhardt, Rainer Spanagel, Wolfgang Sommer	Spanagel	Alcohol dependence alters discounting of delayed outcomes and brain-wide functional connectivity
45	**Ruili Li**, Rick E. Bernardi	Spanagel	Dorsal striatal PDE10A gates cocaine seeking by biasing action control away from perseverative responding
46	Nils Wörner, **Estephania Isabella Leth**, Minyoung Kim, Marcel Weinreich, Ceren Duman Thier, Marc Christian Thier	Thier	Rapid generation of oligodendrocyte progenitor cells from hiPSC-derived neural progenitor cells
47	**Atefeh Pourkhalili Langeroudi**, Obada T. Alhalabi, Rangel Lyubomirov Pramatarov, Nicole Bergstein, Ben Ole Levermann, Vivek Kumar Sahu, Henri Olldashi, Sarah Masser, Ekin Reyhan, Madlena Yan Ly, Varun Venkataramani	Venkataramani	Synaptic trogocytosis drives brain tumor progression
48	**Yilmaz Arda Ates**, Andrey Formozov, Simon Wiegert	Wiegert	Investigating heterosynaptic plasticity with two-photon holographic optogenetics
49	**Lena Eschholz**, J. Simon Wiegert, Alexander Dieter	Wiegert	Interactions of catecholaminergic signaling in the brain
50	**Marton Istvan Molnar**, Alexander Dieter, J. Simon Wiegert	Wiegert	The locus coeruleus catecholaminergic system as a modular regulator of brain network dynamics and animal physiology
51	**Ayah Al-Wazni**, Sebastian Wieland, Thomas Kuner	Wieland	Whole-brain activity mapping of psychotherapy-like effects in mice
52	**Greta Kastien**, Tabea Kohlmund, Martin von Renesse, Barbara Kurpiers, Isa Jauch, Thomas Kuner, Sebastian Wieland	Wieland	Chronic pain drives social avoidance through a thalamocortical circuit dysfunction
53	**Salman Ahmad**, Jose A. Pochapski, Martin Roßmanith, Rick E. Bernardi, Ana M.M. Oliveira, Rainer Spanagel, Anita C. Hansson	Spanagel	Distinct orbitofrontal cortex neuronal populations drive cocaine-seeking behavior
54	**Huma Shaheen**, Alan Kanai, Ryan Patwell, Quirin Krabichler, Valery Grinevich	Grinevich	Oxytocin neurons differentially encode social and non-social rewards
55	**Merve Akan**, Filipe Andrade, Marcus Meinhardt, Rainer Spanagel	Meinhardt	Ibogaine rescues alcohol addiction-induced social deficit
56	**Yalan Luo**, Zihong Zhang, Hilmar Bading	Bading	Norepinephrine impairs astrocytic glutamate uptake: A potential link to excitotoxic signaling

*** Posters marked with an asterisk do not qualify for the IZN students' poster prize.**