



**Genetic epilepsies and other neuronal ion channel disorders:
Mechanisms and therapeutic perspectives.
18th – 20th March 2020, Tübingen, Germany**

Wednesday, March 18th	
7:00 p.m.	Get-Together
Thursday, 19th March	
8:30-8:40 am	Introduction: Holger Lerche (Tübingen)
8:40-9:40 a.m.	Session 1: Neurodevelopmental changes of excitability (15 + 5 min each) Chair: Massimo Mantegazza (Nice) & Camila Esguerra (Oslo)
	Olga Garaschuk (Tübingen): Developmental changes in neocortical network activity
	Knut Kirmse (Jena): Multiple functions of GABA during brain development
	Dirk Isbrandt (Cologne/Bonn): Developmental windows of opportunity
09:40-10:45 am	Session 2: From Genotype to Phenotype (15 + 5; 20 + 5 for 2 speakers) Chair: Dan Lowenstein (San Francisco) & Ulrike Hedrich (Tübingen)
	Rima Nabbout (Paris): Overview of developmental and epileptic encephalopathies
	Rikke Møller (Dianalund) & Yuanyuan Liu (Tübingen): <i>SCN8A</i> variants causing epilepsy or intellectual disability
	Ethan Goldberg (Philadelphia): Mechanisms of <i>SCN3A</i> -related neurodevelopmental disorders
10:45-11:10 am	Coffee Break
11:10-12.15	Session 3: Perspectives of gene therapy (15 + 5 min each) Chair: Dirk Isbrandt (Cologne/Bonn) & Niklas Schwarz (Tübingen)
	Dimitri Kullmann (London): Gene therapy in epilepsy
	Federico Zara (Genoa): Promoter-enhancing gene therapies
	Snezana Maljevic (Melbourne): Antisense oligonucleotide therapies for neurogenetic disorders
12.15-1:15 pm	Lunch Break
1:15–3:30 pm	Session 4: From molecules to networks (15 + 5 min each) Chair: Dimitri Kullmann (London) & Heinz Beck (Bonn)
	Massimo Mantegazza (Nice): A new mechanism triggering cortical spreading depression
	Nikolaus Plesnila (Munich): A FHM3 <i>SCN1A</i> mouse model
	Christoph Fahlke (Jülich): Molecular and cellular pathophysiology of EA6
	Camila Esguerra (Oslo): Zebrafish models: <i>Scn1a</i> and beyond
	Andrew Frank (Iowa City): <i>Drosophila</i> models of migraine-causing mutations and synapse instability
	Frank Winkler (Heidelberg): Use of antiepileptic drugs against brain tumor progression?
	Elena Dragicevic (Munich): Ion channels involved in pain pathways: An automated patch clamp study
3:30-5:30 pm	Poster session (with coffee)
5:30-7:00 pm	Session 5: Molecular therapeutic board (case reports: 5-10 min including discussion; talk 15+5, 20+5 for 2 speakers) Chair: Holger Lerche & Stephan Lauxmann (Tübingen)
	Holger Lerche (Tübingen) & Roland Krause (Luxembourg): Introduction and Platform to search for small molecule therapy
	Ethan Goldberg (Philadelphia): A prenatal diagnosis of <i>GRIN2B</i> encephalopathy

	Ulrike Hedrich & Stephan Lauxmann (Tübingen): Treatment for <i>KCNA2</i> -related encephalopathy
	Rebecca Schüle & Holger Lerche (Tübingen): Treatment for <i>KCNA2</i> -related HSP
	Rikke Moller & Yuanyuan Liu (Dianalund/Tübingen): Resistance to Na ⁺ blockers in patients with <i>SCN2A</i> or <i>SCN8A</i> gain-of-function variants
	Dennis Lal (Cleveland/Luxembourg): Prediction models of ion channel diseases
	Further cases from the audience
8:00 pm	Dinner Liquid

Friday, 20th March	
8:30-9:50 am	Session 6: Collaborative initiatives (all 15 + 5) Chair: Federico Zara (Genoa) & Roland Krause (Luxembourg)
	Daniel Lowenstein: Large scale sequencing and data sharing initiatives in epilepsy
	Roland Krause (Luxembourg): Integration, harmonization and comparison of clinical phenotypes in epilepsy cohorts
	Sergi Beltran (Barcelona): Solve-RD: Concept, structure and first results
	Ethan Goldberg (Philadelphia)(Al George (Chicago)): Center without walls: High throughput electrophysiological screening of ion channel variants
	Sanjay Sisodiya (London): Genetics and imaging in ENIGMA epilepsy
10:10 – 10:30 am	Coffee Break
10:30 am – 12:20 pm	Session 7: Lost in translation: what do we learn from human tissue that is not evident from rodents? (15 + 5, 20 + 5 for 2 speakers) Chair: Henner Koch (Aachen) & Thomas Wuttke (Tübingen)
	Jörg Geiger (Berlin): Multielectrode network recordings from human vs rodent brain slices
	Huibert Mansvelder (Amsterdam): Cortical micro-architecture and neuronal function supporting human cognitive ability
	Niklas Schwarz/Günther Zeck (Tübingen/Reutlingen): Long-term stability of a human cortical slice culture system – a new tool to study network dynamics in human micro-circuits
	Rebecca Hodge (Seattle): RNA sequencing of human tissue
	Alex Skupin (Luxembourg): RNA sequencing in Zebrafish models
12:30-2:00 pm	Farewell Lunch with free discussions

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GEFÖRDERT VOM



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