



SYNABS & CONNECT-GENERATE SYMPOSIUM 2022

June 26th to 29th 2022 | Tutzing, Germany

Keynotes

Josep Dalmau, *ES*

Hiro Furukawa, *US*

Invited Speakers

Simon Fillatreau, *FR*

Masaki Fukata, *JP*

Laurent Groc, *FR*

Eric Hosy, *FR*

Sarosh Irani, *UK*

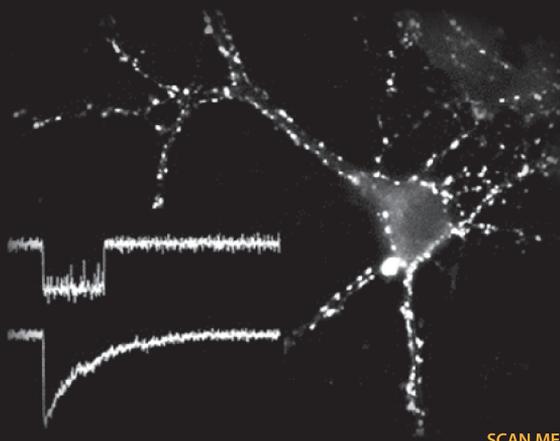
Emmanuelle Mignot, *US*

Alexander Scheffold, *DE*

Maarten Titulaer, *NL*

Sukhvir K. Wright, *UK*

Christine Stadelmann-Nessler, *DE*



www.synabs.de



Organizers:

Christian Geis, *Jena University Hospital*

Speaker SYNABS - Synaptic pathology in autoimmune encephalitis FOR 3004

Frank Leypoldt, *UKSH Kiel/Lübeck*

Speaker GENERATE - GERman NETwork for Research on AuToimmune Encephalitis



Welcome to the SYNABS & CONNECT-GENERATE Symposium 2022 in Tutzing!

The Organizers of the SYNABS & CONNECT-GENERATE Symposium 2022 warmly welcome you to Tutzing.

We are delighted to meet you in a joint symposium of our Research Unit SYNABS, funded by the German Research Council (FOR3004), and our research consortium CONNECT-GENERATE, funded by the Federal Ministry of Education and Research.

Our ambition is to bring together basic, translational, and clinical scientists in the field of autoimmune, antibody-mediated disorders of the central nervous system in an interdisciplinary meeting.

We are looking forward to an exciting Symposium with you!

Christian Geis, SYNABS speaker and
Frank Leypoldt, speaker of CONNECT GENERATE

Scientific Programme of SYNABS & CONNECT-GENERATE Symposium

Please note that all posters as well as oral presentations must be considered "privileged personal communications". No data may be cited or used in any kind of verbal or written scientific correspondence with third parties without explicit permission of the presenting author.

Poster sessions

All Posters should be on display during the entire SYNABS & CONNECT-GENERATE Symposium. Participants are highly encouraged to take advantage of two poster sessions, a vital part of the meeting to foster interaction and exchange.

Young Investigator Awards

The scientific merit of all abstracts (posters and oral presentations) submitted by graduate students and postdoctoral researchers as first authors shall be subject to evaluation by a participants based selection. Five abstracts will be awarded the "SYNABS & CONNECT-GENERATE Young Investigator Award" (four posters and one oral presentation) during the closing session.

SYNABS & CONNECT-GENERATE Organization Team:

Christian Geis, Jena University Hospital

Speaker SYNABS - Synaptic pathology in autoimmune encephalitis FOR 3004

Frank Leypoldt, Kiel University and UKSH Kiel/Lübeck

Speaker GENERATE - GERman NETwork for Research on AuToimmune Encephalitis

Anja Strauß, Jena University Hospital

SYNABS (FOR 3004) coordination

Email: synabs@med.uni-jena.de

Felix Angermüller, Jena University Hospital

Contact on Meeting Venue:

Anja Strauß on +49 (0)3641 9 323536

Melanie Brese +49 (0)3641 9 323557

Scientific Programme

SUNDAY – 26th June

Arrival
15.00 until
18.00

Meeting Registration & Hotel Check In
Evangelische Akademie Tutzing -
<https://www.ev-akademie-tutzing.de/>

Christian Geis; Frank Leypoldt

Get together Dinner – 18.00

Keynote lecture
Chair: Christian Geis (Jena University Hospital)

From 19.30

“A journey through autoimmune
encephalitis: the first 20 years”

*Josep Dalmau (University
of Barcelona, IDIBAPS)*

MONDAY – 27th June

09.00 – 9.15

Welcome

Christian Geis; Frank Leypoldt

Session 1

Pathomechanisms of LGI1 encephalitis
Chair: Angela Kaindl (Charité, Berlin)

9.15 – 9.45

“Clinical and Molecular updates on LGI1
antibody disorders”

*Sarosh Irani (Oxford
University, UK)*

9.45 – 10.15

“Function and regulation of ADAM22, a
receptor for LGI1, in epileptic disorders”

Masaki Fukata (NIPS, Japan)

10.15 – 10.30

“Presynaptic effects of LGI1 autoimmune
antibodies”

*Stefan Hallermann
(University of Leipzig)*

Coffee break 30 min

Session 2 Immunology
Chair: Sarosh Irani (Oxford University, UK)

- 11.00 – 11.15 “Deciphering the tumour-brain axis in autoimmune neurological diseases” *Hedda Wardemann (DKFZ Heidelberg)*
- 11.15 – 11.30 “Brain-targeting monoclonal human antibodies: tools for discovery and new disease concepts” *Harald Prübß (Charité Berlin)*
- 11.30 – 11.45 “NMDA-receptor-Fc-fusion constructs neutralize anti-NMDA receptor antibodies” *Toni Kirmann (University of Leipzig) & Stephan Steinke (Technical University of Braunschweig)*

Lunch break 75 min

Session 3 Genetics of autoimmune encephalitis
Chair: Frank Leypoldt (University of Kiel)

- 13.00 – 13.30 “HLA, KIR and genetics effects in CNS neuroimmune conditions” *Emmanuel Mignot (Stanford, US)*
- 13.30 – 13.45 “Genome-wide association study of anti-NMDA receptor encephalitis” *Anja Tietz (University of Kiel)*
- 13.45 – 14.00 “A genome-wide association study in autoimmune neurological syndromes with anti-GAD65 autoantibodies” *Nico Melzer (University of Düsseldorf)*

Session 4 CNS immunopathology
Chair: Claudia Sommer (University of Würzburg)

- 14.00 – 14.30 “Inflammatory pathomechanisms and oligodendrocyte regeneration in multiple sclerosis” *Christine Stadelmann-Nessler (University of Göttingen)*
- 14.30 – 14.45 “Immunopathology and synaptopathy in human brain tissue” *Romana Höftberger (University of Vienna, AT)*

From 14.45 Coffee break together with poster session

Poster session:

14.45 – 15.45 Session 1: even numbers

15.45 – 16.45 Session 2: odd numbers

Keynote tandem lecture

Chair: Frank Leyboldt (UKSH Kiel/Lübeck)

16.45 – 18:00 “Regulatory plasma cells: identification, characterization, and therapeutic utilization”

Simon Fillatreau (INSERM, Paris, France)

“Analysis of autoreactive T cell responses in human health and disease”

Alexander Scheffold, (University of Kiel)

18.30

Dinner and get together on Starnberger See – ship cruise

TUESDAY – 28th June

Session 5 Investigating synaptic pathology at high spatial and temporal resolution

Chair: Ryuichi Shigemoto (IST Klosterneuburg, Austria)

9.00 – 9.30 “How super-resolution microscopy has changed our concept of basal-state synaptic transmission and what are the prospects for pathological states”

Eric Hosy (CNRS Bordeaux, France)

9.30 – 9.45 “Novel insights into GlyR autoantibody pathology in vitro and in vivo”

Carmen Villmann (University of Würzburg)

9.45 – 10.00 “Super-Resolution Expansion Microscopy”

Markus Sauer (University of Würzburg)

10.00 – 10.15 “Direct effects of antineuronal antibodies”

Christian Geis (Jena University Hospital)

Coffee break 30 min

Session 6 Autoimmune encephalitis: Clinics, Imaging & Therapy
Chair: Josep Dalmau (University of Barcelona, IDIBAPS, ES)

- 10.45 – 11.15 “Clinical phenotypes of AIE and other clues to improve outcomes?” *Maarten Titulaer (University of Rotterdam, NL)*
- 11.15– 11.30 “Brain imaging in autoimmune encephalitis” *Carsten Finke (Charité Berlin)*
- 11.30 – 11.45 “Anti-IgLON5 disease - an immune-mediated treatable tauopathy” *Thomas Grüter (University Bochum)*
- 11.45 – 12.00 “Cerebrospinal fluids findings in autoimmune encephalitis” *Jan Lewerenz (University of Ulm)*
- 12.00 – 12.15 “Treatment in autoimmune encephalitis: current status and future perspectives” *Franziska Thaler (LM University Munich)*
- 12.15 – 12.30 “Generate-Boost: a multicenter, double-blinded RCT to evaluate efficacy and safety of bortezomib in patients with severe autoimmune encephalitis” *Jonathan Wickel (Jena University Hospital) GENERATE-BOOST*

Lunch break – 60 min

Young investigator pitches (Speakers selected from abstracts)
Chair: Christian Geis (Jena University Hospital)

- 13.30 – 13.40 “Cervical lymph nodes and ovarian teratomas as germinal centres in NMDA receptor-antibody encephalitis” *Adam Al-Diwani (University of Oxford, UK)*
- 13.40 – 13.50 “New insights in neuropathology and pathogenesis of autoimmune glial fibrillary acidic protein meningo-encephalomyelitis” *Verena Endmayr (University of Vienna, AT)*
- 13.50 – 14.00 “Single cell-based characterization of systemic and intrathecal immunity in patients with autoimmune encephalitis” *Daniela Esser (University of Kiel)*
- 14.00 – 14.10 “Human cerebrospinal fluid monoclonal CASPR2 autoantibodies show pathological effects in vitro and in vivo” *Scott van Hoof (Charité Berlin)*
- 14.10 – 14.20 “Analysis of glycine receptor autoantibody binding after passive transfer of IgG from stiff person syndrome patients into mice and in tissue-based assays” *Inken Piro (University of Würzburg)*

14.20 – 14.30 “Pathogenic effects of GABAB receptor autoantibodies on neuronal signaling and network excitability” *Josefine Sell (Jena University Hospital)*

Keynote lecture

Chair: Manfred Heckmann (University of Würzburg)

14.30 – 15.30 “Structure, function, and pharmacology of NMDA receptors” *Hiro Furukawa (Cold Spring Harbor Laboratory, NY)*

**Break and free Poster visiting – 60 min
odd and even numbers (opportunity for presenters to visit all posters)**

**Session NMDA receptor pathology
Chair: Laurent Groc (CNRS Bordeaux, France)**

16.30 – 17.00 “NMDA receptor autoantibody: multiscale mechanisms of action” *Laurent Groc (CNRS Bordeaux, France)*

17.00 – 17.30 “Multimodal electrophysiological analyses in an NMDAR-Ab mediated seizure model” *Sukhvir Wright (Aston University, Birmingham, UK)*

17.30 – 17.45 “Placental transfer of NMDA receptor autoantibodies impairs network dynamics in the developing hippocampus” *Knut Kirmse (University of Würzburg)*

17:45 – 18.00 “Human NMDAR autoantibodies disrupt excitatory-inhibitory balance leading to hippocampal network hypersynchrony” *Mihai Ceanga (Jena University Hospital)*

Closing remarks & Awardings

18.00 Christian Geis & Frank Leypoldt

18:15 AG Meetings (SYNABS, GENERATE)

19.00 Dinner

WEDNESDAY – 29th June

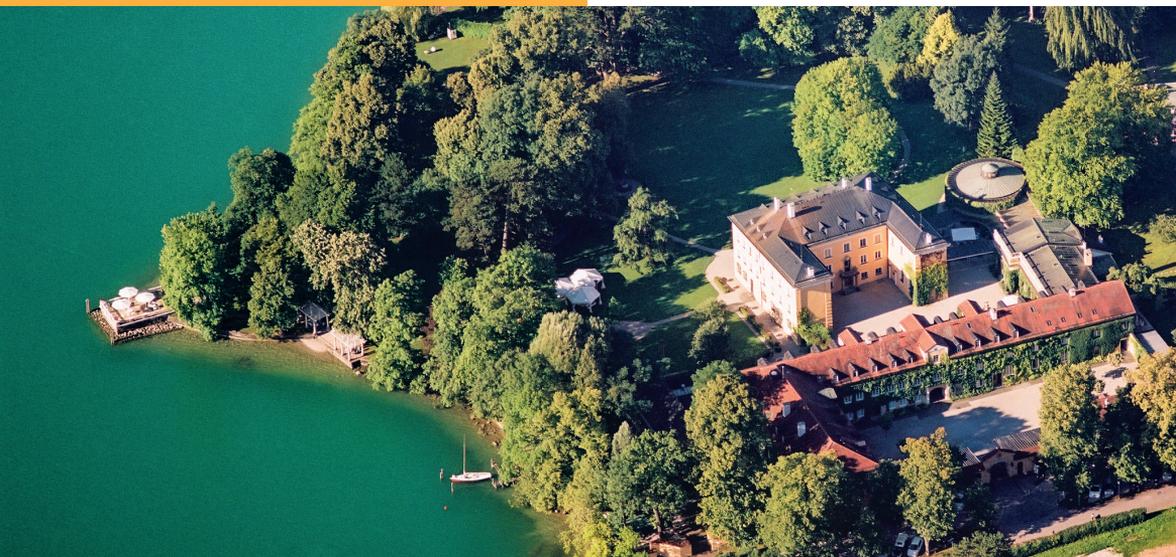
Departure

Poster presentation

	title	<i>name affiliation</i>	3 keywords
PP-01	Maternofetal Transfer of Autoantibodies - Synapsin Antibodies and Associated Phenotypes in Pregnant Women	<i>Isabel Bünger (Charité Berlin)</i>	Maternofetal Transfer Autoantibodies
PP-02	The glycine receptor beta subunit represents a novel target for glycine receptor autoantibodies associated with stiff person syndrome	<i>Anna-Lena Eckes (University of Würzburg)</i>	Glycine Receptor, autoantibodies, stiff person syndrome
PP-03	Advanced optogenetic tools for biological research.	<i>Shiqiang Gao (University of Würzburg)</i>	optogenetics, Channelrhodopsin, photoreceptor
PP-04	Effects of human monoclonal anti-GluN1 autoantibody on NMDA receptor channel function	<i>Shiqiang Gao (University of Würzburg)</i>	autoantibody, NMDA receptor, single channel recording
PP-05	The role of cholecystokinin- and parvalbumin-positive interneurons in AMPAR autoimmune encephalitis	<i>Holger Haselmann (Jena University Hospital)</i>	GluA2, interneuron, cholecystokinin
PP-06	Anti-Drebrin autoantibody-positive patients with suspected limbic encephalitis present with characteristic clinical, neuropathologic, and molecular features	<i>Delara Kamalizade (University of Bonn)</i>	Autoimmune, Encephalitis, Drebrin
PP-07	Monoclonal GABAA receptor antibodies directly cause autoimmune epileptic seizures	<i>Jakob Kreye (Charité Berlin)</i>	GABAA receptor encephalitis, monoclonal antibodies, autoimmune epilepsy
PP-08	Pathogenic effects of GABAB receptor antibodies from patients with autoimmune encephalitis on synaptic structure and memory	<i>Eleonora Anna Loi (Jena University Hospital)</i>	GABAB IgG, Behavior, High resolution microscopy

PP-09	Placental transfer of NMDA receptor autoantibodies impairs correlated spontaneous activity in the developing hippocampus	<i>Myrtill Majoros (Jena University Hospital)</i>	NMDAR, autoantibody, neurodevelopment
PP-10	Tumor-derived Autoreactive Antibodies in Paraneoplastic Cerebellar Degeneration	<i>Joshua Malapit (German Cancer Research Center (DKFZ); Heidelberg)</i>	autoantibodies, ovarian cancer, paraneoplastic cerebellar degeneration
PP-11	Reduction of voltage-gated calcium channels at the presynaptic active zone by LGI1-autoantibody in mice	<i>Jaqueline Montanaro-Punzengruber (Institute for Science and Technology, Austria)</i>	
PP-12	Atypical NMDA receptor expression in a diffuse astrocytoma, MYB- or MYBL1-altered as a trigger for autoimmune encephalitis	<i>Marc Nikolaus (Charité Berlin)</i>	1) NMDA receptor encephalitis 2) diffuse astrocytoma, MYB- or MYBL1-altered 3) ovarian teratoma
PP-13	Human NMDAR autoantibodies disrupt excitatory-inhibitory balance leading to hippocampal network hypersynchrony	<i>Vahid Rahmati (Jena University Hospital)</i>	NMDA receptor encephalitis, excitatory-inhibitory imbalance, network oscillation, neural network modeling
PP-14	Immune Cell Signatures of Autoimmune Limbic Encephalitis: Immunopathogenesis and Clinical Implications	<i>Saskia Räuber (University of Düsseldorf)</i>	Limbic encephalitis, multidimensional flow cytometry, machine learning
PP-15	Structural and genetic features of potent antibodies elicited by SARS-CoV-2 Beta variant infection in the context of antigenic drift	<i>Momsen Reincke (Charité Berlin)</i>	monoclonal antibodies, immunology, structural analysis
PP-16	Autoimmune Global Amnesia as Manifestation of AMPAR Encephalitis and Neuropathologic Findings	<i>Gerda Ricken (University of Vienna)</i>	AMPA receptor encephalitis, hippocampal sclerosis, amnesia
PP-17	Significance of neuronal antibodies in patients with cognitive disorders and therapy with immunoadsorption	<i>Rosa Rößling (Charité Berlin)</i>	neuronal antibodies, dementia, apheresis

PP-18	Elucidation of presynaptic pathomechanisms induced by anti-LG11 autoantibodies by super-resolution microscopy	Stefan Sachs (University of Würzburg, Biocenter)	Super-resolution microscopy, expansion microscopy, LG11
PP-19	Antigen and epitope identification of brain autoantibodies by crosslinking mass spectrometry	Elisa Sánchez Sendín (German Center for Neurodegenerative Diseases (DZNE) Berlin)	
PP-20	mGluR5 expression on Hodgkin's lymphoma promotes tumor progression and may explain the association with anti-mGluR5 encephalitis	Sofia Schnell (Charité Berlin)	
PP-21	LG11 antibodies increase neuronal excitability	Alexander Stumpf (Charité Berlin)	LG11 electrophysiology excitability
PP-22	Acute effects of human monoclonal anti-GluN1 autoantibodies on NMDA-receptor channel function	Abdulla Taha (Jena University Hospital)	NMDAR, IgG, Whole-cell patch clamp, Immunostaining
PP-23	Genetic Code Expansion and Click-Chemistry Labeling to Visualize GABA-A Receptors by Super-Resolution Microscopy	Christian Werner (University of Würzburg, Biocenter)	GABA-A receptor, labeling technique, limbic encephalitis
PP-24	Progressive Encephalomyelitis with Rigidity and Myoclonus - Neuropathology and Case Study	Michael Winklehner (University of Vienna)	Glycine Receptor Antibodies, Progressive Encephalomyelitis with Rigidity and Myoclonus, Neuropathology
PP-25	Synaptic network dysfunction and increased intrinsic neuronal excitability in GluA2 autoimmune encephalitis	Yang Yuan (Jena University Hospital)	GluA2, synaptic network, autoimmune encephalitis
PP-26	ELKS family member Bruchpilot protein subcluster area increases HDAC6 dependent in presynaptic active zones	Maximilian Zettner (University of Würzburg)	Active Zone; Presynaptic Plasticity; HDAC6



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