

Annual Report 2015









APPENDIX



A close-up photograph of the eyepieces of a white microscope. The two eyepieces are black with silver-colored rings. The lenses are visible, showing some internal reflections. A red vertical bar is overlaid on the left side of the image, and the word 'Content' is written in white text on it.

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UNIVERSITY HOSPITAL OF NEUROLOGY	
DEPARTMENT OF NEUROLOGY AND STROKE	
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DEPARTMENT OF COGNITIVE NEUROLOGY	
DEPARTMENT OF CELLULAR NEUROLOGY	
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PUBLICATIONS AND STUDENT TRAINING IN 2015	

University Hospital of Neurology



Clinical Staff

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INTENSIVE CARE/ STROKE UNIT

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Department of Neurology and Stroke



Clinical and Scientific Staff

HEAD OF THE DEPARTMENT

Prof. Dr. Ulf Ziemann

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Prof. Dr. Herrmann Ackermann
PD Dr. Felix Bischof (until 07/2015)
PD Dr. Jennifer Diedler (Neurointensive Care, until 12/2015)
Dr. Markus Krumbholz (since 07/2015)
PD Dr. Christine Meyer-Zürn (Cardiologist)
Dr. Florian Müller-Dahlhaus
Prof. Dr. Ulrike Naumann
Dr. Sven Poli, MSc (Stroke Unit)
Prof. Dr. Ghazaleh Tabatabai (Interdisciplinary Division
of Neuro-Oncology)

SCIENTISTS/RESIDENTS

Dr. Asghar Abbasi (until 03/2015)
Dr. Paolo Belardinelli (since 04/2015)
Dr. Til Ole Bergmann (since 10/2015)
Dr. Sarah Beyeler (until 12/2015)
Dr. Corinna Blum (since 12/2015)
Dr. Bettina Brendel
Dr. Christian Braun (until 05/2015)
Dr. Susanne Dietrich
Mahamed Yasser Elnaggar (since 03/2015)
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TECHNICAL STAFF/ADMINISTRATION

Dipl.-Ing. Rüdiger Berndt (Electronics,
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MEDICAL DOCTORAL STUDENTS

Elina Brendle (Supervisor Prof. Dr. Tabatabai)
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MASTER STUDENTS

Rebecca Czolk (Supervisor Prof. Dr. Naumann)
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LAB ROTATIONS

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Vanessa Hertlein (Biochemie, Prof. Dr. Tabatabai)
Raika Sieger (Biochemie, Prof. Dr. Tabatabai)

PROFESSORSHIP FOR NEUROREHABILITATION

Prof. Dr. Herrmann Ackermann
PD Dr. Ingo Hertrich

Clinical Studies

STROKE STUDIES

ACTION (EudraCT: 2013-001514-15): A Multicenter, Double-Blind, Placebo-Controlled, Randomized, Parallel-Group Study to Evaluate the Safety and Efficacy of Intravenous Natalizumab (BG00002) on Reducing Infarct Volume in Acute Ischemic Stroke
Investigator: Sven Poli

ATACH-II: A Phase III Randomized Multicenter Clinical Trial of Blood Pressure Reduction for Hypertension in Acute Intracerebral Hemorrhage
Investigator: Sven Poli

ATTICUS: Apixaban for treatment of embolic stroke of undetermined source
Investigator: Sven Poli

CAPIAS: The carotid plaque imaging in acute stroke (CAPIAS) study: protocol and initial baseline data
Investigator: Ulf Ziemann

CL1-44819-003: Effects of S 44819 on GABAergic system measured by Transcranial Magnetic Stimulation (TMS) in healthy young male volunteers. A phase I, monocentre, randomized, double-blind, placebo-controlled, cross-over study, with 3 treatment periods (placebo, S 44819 50 mg, S 44819 100 mg).
Investigator: Prof. Dr. med. Ulf Ziemann

CLEAR-IVH III (EudraCT-Nr.: 2008-00691-39): Clot Lysis: Evaluating Accelerated Resolution of Intraventricular Hemorrhage Phase III.
Investigator: Sven Poli

CoolStroke1: COOLing for Normothermia in Stroke 1 (COOLStroke 1) – A Randomized, Controlled Trial to Evaluate the EMCOOLS Brain.Pad versus Cold Infusions for Normothermia Treatment in Awake Ischemic Stroke Patients
Investigator: Sven Poli

CoolStroke2: COOLing for Normothermia in Stroke 2 (COOLStroke 2) – A Randomized Pilot Trial Evaluating Intranasal Cooling with the QuickCool Device Adjunct to Standard Normothermia Treatment in Awake Ischemic Stroke Patients
Investigator: Sven Poli

DEPTH-SOS: DEcompressive Surgery Plus Hypothermia in Space Occupying Stroke.
Investigator: Sven Poli

Destiny-R: DEcompressive Surgery for the Treatment of malignant INfarction of the middle cerebral artery – Registry.
Investigator: Sven Poli

ECASS-4 (EudraCT: 2012-003609-80): European Cooperative Acute Stroke Study-4. Extending the time for Thrombolysis in Emergency Neurological Deficits, ECASS-4: EXTEND
Investigator: Sven Poli

EuroHYP1 (EudraCT: 2012-002944-25): EuroHYP-1: European multicentre, randomised, phase III clinical trial of therapeutic hypothermia plus best medical treatment versus best medical treatment alone for acute ischaemic stroke
Investigator: Sven Poli

INCH (EudraCT-Nr.: 2008-005653-37): Multicenter, prospective randomized trial on the use of prothrombin complex and fresh frozen plasma in patients with intracerebral hemorrhage related to vitamin k antagonists.
Investigator: Sven Poli

MISTIE III: Minimally Invasive Surgery plus rt-PA for ICH Evacuation Phase III
Investigator: Sven Poli

POCT-NOAC: Point-of-Care Messung der Blutgerinnung bei Therapie mit neuen oralen Antikoagulantien.
Investigator: Sven Poli

RASUNOA: Registry of acute stroke under new oral anticoagulants (RASUNOA).
Investigator: Sven Poli

RASUNOA-Prime: Register für Akute Schlaganfälle Unter Neuen Oraln Antikoagulantien – Prime
Investigator: Sven Poli

RESPECT ESUS: Randomized, double-blind, Evaluation in secondary Stroke Prevention comparing the Efficacy and safety of the oral Thrombin inhibitor dabigatran etexilate (110 mg or 150 mg, oral b.i.d.) versus acetylsalicylic acid (100 mg oral q.d.) in patients with Embolic Stroke of Undetermined Source
Investigator: Sven Poli

REVACEPT (EudraCT-Nr.: 2011-001006-10): An inhibitor of platelet adhesion in symptomatic carotid stenosis: A phase II, multicenter, randomized, dose-finding, double-blind and placebo controlled superiority study with parallel groups.
Investigator: Sven Poli

Risikostratifizierung von Schlaganfallpatienten durch Analyse der autonomen Funktion (AKF-Programm)
Investigators: Christine Meyer-Zürn, Jennifer Diedler

SITSopen: An open, prospective, international, multicentre, controlled study of safety and efficacy of thrombectomy in acute occlusive stroke following initiation with intravenous thrombolysis with alteplase in accordance with accepted guidelines, compared to intravenous thrombolysis only
Investigators: Sven Poli, Ulrike Ernemann

SPOCT-NOAC 1: Specific Point-of-Care Testing of Coagulation in Patients Treated with Non-Vitamin K Antagonist Oral Anticoagulants – Part Ia/b
Investigator: Sven Poli

WakeUP (EudraCT:2011-005906-32): Efficacy and safety of MRI-based thrombolysis in wake-up stroke. a randomised, double-blind, placebo-controlled trial
Investigator: Sven Poli

NEUROIMMUNOLOGY STUDIES

101MS326 (ASCEND): (EudraCT-Nr. :201-0-021978-11) A Multicenter, Randomized, Double-Blind, Placebo-Controlled Study of the Efficacy of Natalizumab on Reducing Disability Progression in Subjects With Secondary Progressive Multiple Sclerosis.
Investigator: Felix Bischof/Markus Krumbholz

CD-IA-MEDI-551-1155 (Medi-551) (EudraCT Nr: 2014-000253-36): A Double-masked, Placebo-controlled Study with Open-label Period to Evaluate the Efficacy and Safety of MEDI-551 in Adult Subjects with Neuromyelitis Optica and Neuromyelitis Optica Spectrum Disorder.
Investigator: Markus Krumbholz

CFTY720D2406 (PASSAGE): (NIS – Phase 4)
Prospektive, nicht-interventionelle, multinationale Studie mit Parallel-Kohorten zur Bewertung der Langzeit-Sicherheit in Patienten mit MS, deren Behandlung kürzlich auf tägliche Fingolimod-Gabe umgestellt wurde oder die mit einer anderen zugelassenen krankheitsmodifizierenden Therapie behandelt werden
Investigator: Felix Bischof/Markus Krumbholz

CFTY720DDE02 (PANGAEA-NIS – Phase 4): Multizentrische, prospektive, nicht-interventionelle Langzeit-Registerstudie zur Beschreibung der Sicherheit und des Stellenwerts von Gilenya® (fingolimod 0.5 mg) in der Behandlung von MS Patienten.: Post-Authorization non-interventional German safety study of Gilenya® in MS patients.
Investigator: Felix Bischof/Markus Krumbholz

CFTY720D2405 (TRANSITION): Eine zweijährige Beobachtungsstudie zur Untersuchung des Sicherheitsprofils von Fingolimod bei Patienten mit Multipler Sklerose, die von Natalizumab auf Fingolimod wechseln
Investigator: Felix Bischof/ Markus Krumbholz

CFTY720DDE17 (START)(EudraCT-Nr. 2012-000653-32):
A 1-week, open-label, multicenter study to explore conduction abnormalities during first dose administration of fingolimod in patients with relapsing-remitting multiple sclerosis.
Investigator: Felix Bischof/Markus Krumbholz

CFTY720D2399 (Longterms) (EudraCT-Nr. 2010-020515-37):
A single arm, open-label, multicenter study evaluating the long-term safety, tolerability and efficacy of a 0.5 mg fingolimod (FTY720) administered orally once daily in patients with multiple sclerosis.
Investigator: Ulf Ziemann

Dimethyl fumarate: Influence of Dimethyl fumarate (DMF) on fMRI markers of cortical resting state network connectivity in relapsing remitting multiple sclerosis (RRMS).
Investigator: Ulf Ziemann

Kompetenznetz MS: Concerted Action on Biomarker for Individualized Multiple Sclerosis Therapy in Germany – Control MS: Prospektive Kohortenstudie bei Patienten mit KIS (klinisch isoliertem Syndrom) und früher Multipler Sklerose.
Investigator: Ulf Ziemann

Clinical Studies

NEUROIMMUNOLOGY STUDIES

REGIMS Register:

Ein Immuntherapieregister zur Verbesserung der Arzneimittel-sicherheit in der MS-Therapie“ *Investigator: Felix Bischof*

TMP001_MS (TMP001) (EudraCT Nr: 2014-004483-38): TMP001 in relapsing-remitting multiple sclerosis: a multicentre open, baseline-controlled phase IIa clinical trial. *Investigator: Ulf Ziemann*

WA 21493 OLE (EudraCT-Nr. 2007-006338-32): A Phase II, multicenter, randomized, placebo and Avonex controlled dose finding study to evaluate the efficacy and safety of ocrelizumab in patients with relapsing-remitting multiple sclerosis. *Investigator: Ulf Ziemann*

WA21092 (OPERA) (EudraCT-Nr. 2010-020337-99): A Randomized, Double-Blind, Double-Dummy, Parallel-Group Study To Evaluate The Efficacy And Safety Of Ocrelizumab In Comparison To Interferon Beta-1a (Rebif®) In Patients With Relapsing Multiple Sclerosis. *Investigator: Ulf Ziemann*

WA25046 (ORATORIO)(EudraCT-Nr.2010-020338-25): A Phase III, multicenter, randomized, parallel-group, double-blinded, placebo-controlled study to evaluate the efficacy and safety of ocrelizumab in adults with primary progressive multiple sclerosis. *Investigator: Ulf Ziemann*

NEUROONCOLOGY STUDIES

CATNON Intergroup Trial (EORTC 26053): Phase III trial on concurrent and adjuvant temozolomide chemotherapy in non-1p/19q deleted anaplastic glioma. *Investigator: Ghazaleh Tabatabai, Sponsor: EORTC*

EORTC 26101: Phase II trial exploring the sequence of bevacizumab and lomustine in patients with first recurrence of glioblastoma (will be expanded from 2014 as Phase III trial). *Investigator: Ghazaleh Tabatabai, Sponsor: EORTC*

GAPVAC-101: a phase I study using an innovative individualized peptide vaccination-based immunotherapy in newly diagnosed glioblastoma (www.gapvac.eu) *Investigator: Ghazaleh Tabatabai, Sponsor: Immatix GmbH, Tübingen*

iMRI/5-ALA: a parallel group phase II trial to investigate maximum extent of resection based on iMRI versus 5-ALA. *Investigator: Constantin Roder, Sponsor: University Hospital Tübingen*

NOA12: Phase I/II trial exploring the combination of the compound BIBF120 with re-irradiation versus re-irradiation alone in progressive glioblastoma. *Investigator: Daniel Zips*

Third-Party Funding

ONGOING GRANTS

Terminal differenzierte B Lymphozyten bei Patienten mit Multipler Sklerose

Project leader: PD Dr. Felix Bischof
Funding institution: Novartis

Verarbeitung multimodaler emotionaler Signale bei Patienten mit Multipler Sklerose

Project leader: PD Dr. Felix Bischof
Funding institution: Novartis

Mechanismen des T Helfer Typ 9 induzierten neuronalen Schadens

Project Leaders: PD Dr. Felix Bischof, Philipp Nakov
IZKF Promotionsstipendium

Perception of speech at normal and ultra-fast syllable rates - functional neuroplasticity in blind subjects and its relation to the normal speech processing network

(DFG HE 1573/6-2)
Project Leader: PD Dr. Ingo Hertrich
Funding institution: Deutsche Forschungsgemeinschaft (DFG)

Cardiac Autonomic Function for Risk Prediction in Cryptogenic Stroke (CRYPTIC-Study)

Project leader: PD Dr. Christine Meyer-Zürn, Dr. Sven Poli, PD Dr. Jennifer Diedler
Funding institution: Medtronic

Erforschung der molekularen Mechanismen einer ISCADOR Behandlung des Glioblastoms

Project leader: Prof. Dr. Ulrike Naumann
Funding institution: Innovationsstiftung Ulrike Sauer, Förderverein komplementärmedizinische Forschung

Funktionelle und therapeutische Bedeutung des Neuropeptid-prozessierenden Enzyms Carboxypeptidase E im Glioblastom

Project leader: Prof. Dr. Ulrike Naumann
Funding institution: German Cancer Foundation

Funktionelle und therapeutische Bedeutung einer Behandlung des Glioblastoms mit Mistellektinen

Project leader: Prof. Dr. Ulrike Naumann
Funding institution: Software AG

Funktionelle Bedeutung der in Perizyten Gliom-assoziierten Gefäße exprimierten EMT-Faktoren SLUG, SNAIL und TWIST

Project Leader: Prof. Dr. Ulrike Naumann
Funding institution: Henriette und Otmar Eier-Stiftung, IZKF Promotionskolleg

COOLing for Normothermia in Stroke 1 (COOLStroke 1)

Project Leader: Dr. Sven Poli
Funding institution: EMCOOLS Medical Cooling Systems AG, Brucknerstr. 6-7a, 1040 Wien, Austria

Berufung von Spitzenmedizinern aus dem Ausland

Project Leader: Prof. Dr. Ghazaleh Tabatabai
Funding institution: Else Kröner Fresenius Stiftung / German Scholars Organization

Pharmacological characterization of TMS-EEG biomarkers of excitability and effective connectivity in human cortex

Project leader: Prof. Dr. Ulf Ziemann
Funding institution: Werner Reichardt Centre for Integrative Neuroscience (CIN)

Correlated oscillations as biomarkers of neuronal dysfunction in multiple sclerosis

Project leader: Prof. Dr. Ulf Ziemann, Prof. Dr. Markus Siegel
Funding institution: Werner Reichardt Centre for Integrative Neuroscience (CIN)

Nichtinvasive zentrale Schmerzmodulation durch TMS-Hemmung des sekundären somatosensorischen Kortex gesunder Probanden

Project leader: Prof. Dr. Jörn Lötsch, Prof. Dr. Ulf Ziemann
Funding institution: Deutsche Forschungsgemeinschaft (DFG)

Bewegungsverklänglichung zur Rehabilitation der Armmotorik nach Schlaganfällen

Project Leader: Prof. Dr. Eckart Altenmüller (Hochschule für Musik, Theater und Medien Hannover), Prof. Dr. Udo Dahmen (Popakademie Baden-Württemberg), Prof. Dr. Ulf Ziemann
Funding institution: Hertie Foundation

Strengthening the SMA-M1 connection of human motor cortex by a novel non-invasive brain stimulation protocol to enhance motor performance and learning (DFG ZI 542/7-1)

Project Leader: Prof. Dr. Ulf Ziemann
Funding institution: Deutsche Forschungsgemeinschaft (DFG)

Drug Repositioning for Multiple Sclerosis - DrugRep-Teilvorhaben Zentrale Studienleitung (BMBF 16GW0059)

Project Leader: Prof. Dr. Ulf Ziemann
Funding institution: Bundesministerium für Bildung und Forschung (BMBF)

Influence of Dimethylfumarate (DMF) on fMRI markers of cortical resting state network connectivity in relapsing remitting multiple sclerosis (RRMS)

Project Leader: Prof. Dr. Ulf Ziemann
Funding institution: Biogen Idec GmbH

Inhibition in the somatosensory system: an integrated neuropharmacological and neuroimaging approach

Project Leaders: Prof. Dr. Ulf Ziemann / Prof. Dr. Christoph Braun
Funding institution: Werner Reichardt Centre for Integrative Neuroscience (CIN)

Induction of brain plasticity with closed-loop EEG-triggered transcranial magnetic stimulation

Project Leaders: Dr. Christoph Zrenner
Funding institution: Medical Faculty University Tübingen, Fortüne Program

Third-Party Funding

NEW GRANTS

Influence of tumor irradiation on glioma therapy using the oncolytic adenovirus Ad-Delo3-RGD

Project Leader: Prof. Dr. Ulrike Naumann

Funding institution: Else-Übelmesser-Stiftung

COOLing for Normothermia in Stroke 2 (COOLStroke 2)

Project Leader: Dr. Sven Poli

Funding institution: QuickCool AB, Lund, Sweden

Interdisciplinary translational Neuro-Oncology from molecular alterations to patient stratification and therapy

Project Leader: Prof. Tabatabai

Funding institution: Medical Faculty Tübingen

Individualizing the treatment of CNS Metastases

Project Leader: Prof. Tabatabai

Funding institution: Medical Faculty Tübingen

Apixaban for treatment of embolic stroke of undetermined source (ATTICUS randomized trial)

Leaders: Prof. Tobias Geisler / Prof. Ulf Ziemann

Funding institution: Bristol-Myers Squibbs

An exploratory study assessing TMS plasticity deficits in patients with AD and aMCI in comparison to healthy controls

Leaders: Prof. Ulf Ziemann / Prof. Daniela Berg /

Prof. Christoph Laske

Funding institution: Janssen Pharmaceuticals NV

Implantable, bidirectional Brain-Computer-Interface for restoration of motor functions (MOTOR-BIC)

Leaders for Tübingen Project: Prof. Niels Birbaumer /

Prof. Ulf Ziemann

Funding institution: BMBF

Study center for neuro-cardio-vascular emergency and intensive care medicine (NKVNI)

Leaders: Profs. Gawaz / Schlensak / Tatagiba / Ziemann

Funding institution: Medical Faculty Tübingen

Effects of S 44819 on GABAergic system measured by Transcranial Magnetic Stimulation (TMS) in healthy young male volunteers

Leader: Prof. Ulf Ziemann

Funding institution: Institut de Recherches Internationales Servier (I.R.I.S.)

Inhibition in the somatosensory system: an integrated neuropharmacological and neuroimaging approach

Project Leaders: Prof. Dr. Ulf Ziemann,

Prof. Dr. Christoph Braun

Funding institution: Werner Reichardt Centre for Integrative Neuroscience (CIN)

Induction of brain plasticity with closed-loop EEG-triggered transcranial magnetic stimulation

Project Leaders: Dr. Christoph Zrenner

Funding institution: Medical Faculty University Tübingen, Fortüne Programme

Awards

Ulf Ziemann

Listing "Top Physicians 2015" (Guter Rat)

Medical Theses

(Completed in 2015)

Toni Silber

Periinterventionelle Komplikationen der perkutanen Angioplastie und Stentimplantation in Stenosen intrakranieller Arterien in 46 Patienten

Supervisor: PD Dr. Felix Bischof

Johannes Mörike

Die Bedeutung der N-Glykosylierung von T-Zell Populationen in der Experimentellen Autoimmunen Enzephalomyelitis

Supervisor: PD Dr. Felix Bischof

Jan Piel

Der Einfluss von immunmodulierender Therapie auf die Glykosylierung von Immunzellen bei Patienten mit schubförmiger multipler Sklerose

Supervisor: PD Dr. Felix Bischof

Bachelor Theses

(Completed in 2015)

Roland Genthner

**Gesten – Neurales Spektrum und Bedeutung
für die Sprachverarbeitung**

Supervisor: PD Dr. Ingo Hertrich

Sarah Hafner

**Individuelle Unterschiede beim Lippenlesen –
In Zusammenhang mit dem McGurk Effekt**

Supervisor: PD Dr. Ingo Hertrich

Ricarda Farsch

**Hintergründe der filler „äh, ähm“, ihre Wirkung
auf den Hörer und die Kommunikation**

Supervisor: PD Dr. Ingo Hertrich

Diploma/Master Theses

(Completed in 2015)

Simone Burkhardt

**The relevance of interleukin 6 and CXCL10 in Th9 cell
mediated neuronal damage**

Supervisor: PD Dr. Felix Bischof.

Guest Researcher

Prof. Dr. Luis Velazquez-Perez, Cuba (Awardee of a Georg
Forster Research Award of the Alexander-von-Humboldt
Foundation)

Host: Prof. Dr. Ziemann

Dr. Nigel Rogasch, Monash University, Melbourne, Australia
(Awardee of DAAD short term grant)

Host: Prof. Dr. Ziemann

Department of Neurology and Epileptology



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PD Dr. Niels Focke
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Dr. Snezana Maljevic
Prof. Dr. Marcel Dihné

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Dr. Caroline Freilinger
Samira Hamzehian (since 08/2015)
Dr. Ulrike Hedrich
Haosi Huang (since 08/2015)
Ashish Kaul Sahib
Josua Kegele
Dr. Silke Klamer
Dr. Henner Koch
Stefan Lauxmann
Christina Lipski
Dr. Yuanyuan Liu
Dr. Pascal Martin
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Cristina Niturad
Harshad PA (since 09/015)
Dr. Filip Rosa
Dr. Julian Schubert
Dr. Victoria Schubert
Dr. Niklas Schwarz (since 01/2015)
Dr. Sören Stirn (until 04/2015)
Debora Vittore (since 03/2015)
Dr. Nathalie Winter
Dr. Stefan Wolking
Dr. Thomas Wuttke
Pu Yan (since 09/2015)

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 Sarah Rau
 Susanne Stimmler
 Doris Wieder
 Nicole Zepezauer (bis 12/2015)

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 Julia Knaus
 Nicole Kusch
 Andreas Naros
 Siona Pfeffer
 Theresa Simperl
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Janine Brandes
Supervisor: Dr. Henner Koch

Lisa Kirchberger
Supervisor: Dr. Yuanyuan Liu, Dr. Snezana Maljevic

Clinical Studies

CLINICAL STUDIES

ZEDEBAC: A multicenter, open-label and non-interventional study to investigate Eslicarbazepinacetat in focal epilepsies.
Investigator: Prof. Dr. Yvonne Weber

Artemis: A Randomized, Double-Blind, Placebo Controlled Trial Examining the Safety and Efficacy of Midazolam Intranasal Spray (USL261) for the Treatment of Intermittent Bouts of Increased Seizure Activity in the Epilepsy Monitoring Unit
Investigator: Prof. Dr. Yvonne Weber

SP0982: A double-blind, randomized, placebo-controlled, parallel-group, multicenter study to evaluate the efficacy and safety of lacosamide as adjunctive therapy for uncontrolled primary generalized tonic-clonic seizures in subjects with IGE
Investigator: Prof. Dr. Yvonne Weber

EP0077: A 12-month noninterventional, postmarketing multicentre study to evaluate the effectiveness of brivaracetam as adjunctive therapy in patients with epilepsy with partial-onset
Investigator: Prof. Dr. Yvonne Weber

Vibes: A noninterventional study of Vimpat (lacosamide) added to one baseline antiepileptic drug therapy in patients with brain tumor-related epilepsy.
Investigator: Prof. Dr. Yvonne Weber

A multicenter, single-arm, open-label, post-marketing safety study to evaluate the risk of seizure among subjects with metastatic castration-resistant prostate cancer treated with enzalutamide who are at potential increased risk of seizure.
Investigator: Prof. Dr. Yvonne Weber

A randomized, placebo-controlled, double-blind, multicenter clinical investigation to evaluate the performance and safety of the chordate system when used in the treatment of acute migraine attacks of moderate to severe intensity.
Investigator: PD Dr. Tobias Freilinger

PredCh – Efficacy and safety of oral prednisone as add-on therapy in prophylactic treatment of episodic cluster headache: a randomized, placebo controlled parallel study
Investigator: PD Dr. Tobias Freilinger

A randomized, controlled, double-blind, two-arm clinical trial to assess safety and efficacy of transcutaneous vagus nerve stimulation (t-VNS®) in patients with drug-resistant epilepsy.
Investigator: Prof. Dr. Yvonne Weber

Vibes: A noninterventional study of Vimpat (lacosamide) added to one baseline antiepileptic drug therapy in patients with brain tumor-related epilepsy.
Investigator: Prof. Dr. Yvonne Weber

A multicenter, single-arm, open-label, post-marketing safety study to evaluate the risk of seizure among subjects with metastatic castration-resistant prostate cancer treated with enzalutamide who are at potential increased risk of seizure.
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A randomized, placebo-controlled, double-blind, multicenter clinical investigation to evaluate the performance and safety of the chordate system when used in the treatment of acute migraine attacks of moderate to severe intensity.
Investigator: PD Dr. Tobias Freilinger

PredCh – Efficacy and safety of oral prednisone as add-on therapy in prophylactic treatment of episodic cluster headache: a randomized, placebo controlled parallel study
Investigator: PD Dr. Tobias Freilinger

Third-Party Funding

GRANTS

Recruitment of patients with epilepsy for genetic and pharmacogenetic examinations
[Rekrutierung von Patienten für genetische und pharmakogenetische Untersuchungen bei Epilepsien]
Project leader: Prof. Dr. Holger Lerche, Prof. Dr. Yvonne Weber
Funding Institution: German Society for Epileptology, UCB Pharma, foundation 'no epilep'

Epilepsy Pharmacogenomics: Delivering biomarkers for clinical use (EpiPGX) until 10/2015

Project leader: Prof. Dr. Holger Lerche (Deputy coordinator)
Funding institution: EU Seventh Framework Programme (FP7) (EU-279062)

German Network of Neurological and Ophthalmological Ion Channel Disorders (IonNeurONet) until 08/2015

Project leader: Prof. Dr. Holger Lerche (Network-Coordinator), Dr. Snezana Maljevic (Project leader)
Funding institution: Federal Ministry of Education and Research (BMBF Network Rare Diseases)

Gene panel diagnostic testing for patients with epilepsy [Gen-Panel Diagnostik bei Patienten mit Epilepsie]

Project leader: Prof. Dr. Yvonne Weber
Funding institution: University of Tübingen (AKF)

Evaluating voxel-based functional connectivity measures in epilepsy

Project leader: PD Dr. Niels Focke
Funding institution: University of Tübingen (CIN pool project)

Pathophysiology of the familial hemiplegic migraine: Examination of a newly developed transgenic SNC1A mouse model

[Pathophysiologie der familiären hemiplegischen Migräne: Untersuchung an einem neu entwickelten transgenen SCN1A Mausmodell]
Project leader: PD Dr. Tobias Freilinger
Funding institution: German Research Foundation (DFG) (FR 3324/2-1)

Pathophysiology of non-classical epileptic encephalopathies (EE)

[Pathophysiologie von nicht klassischen epileptischen Enzephalopathien (EE)]
Project leader: Prof. Dr. Yvonne Weber
Funding institution: German Research Foundation (DFG) (WE 4896/3-1)

Prophylactic treatment of hemiplegic migraine with lamotrigine – a pilot study

Project leader: PD Dr. Tobias Freilinger
Funding institution: Centre for Rare Diseases, Tübingen

Pathomechanisms of acquired epilepsy autoimmune disorders associated with anti-NMDA receptor and anti-LG1 autoantibodies

Project leader: Dr. Gina Elsen
Funding institution: University of Tübingen (fortune)

Tri-Modal Network-Analysis using [18F]FDG-PET, fMRI and HD-EEG

Project leader: PD Dr. Niels Focke
Funding institution: University of Tübingen (CIN pool project)

NEW GRANTS

Exploring the function of the central control of breathing in mice with sodium-channel mutations causing epilepsy, implications for sudden unexpected death in patients with epilepsy (SUDEP)

[Die zentrale Kontrolle der Atmung in Mäusen mit Natriumkanalmutationen, die Epilepsien verursachen und die Implikation für den plötzlichen unerwarteten Tod bei Epilepsie]
Project leader: Dr. Henner Koch
Funding institution: German Research Foundation (DFG) (KO 4877/2-1)

Post processing in epileptology

Project leader: PD Dr. Niels Focke
Funding institution: University of Tübingen (AKF)

In vivo approaches to study seizure generation and cortical spreading depression in two- and three-dimensions in awake Scn1a knock-in mouse models for idiopathic epilepsy and migraine.

Project leader: Dr. Ulrike Hedrich
Funding institution: University of Tübingen (fortune)

Exist Gründerstipendium Epilog. Etablierung eines Devices zur Anfallsdeduktion (Bundesministerium für Wirtschaft und Energie (O3EGSBW299))

Diploma/Master/Doctoral Theses

BACHELOR

Norman Sinnigen

Effect of 4-Aminopyridin on the de novo Kv1.2 mutations R297Q und L298F by using two-electrode voltage clamp recordings in *Xenopus laevis* oocytes

Supervisor: Dr. Ulrike Hedrich

MASTER

Sabina Vejzovic

Functional expression of epilepsy-related mutations in KCNQ2 and KCNQ3 genes

Supervisor: Dr. Snezana Maljevic

MD THESES

Andreas Naros

Neuronale Expressionsmuster von ClC2 Cl- Kanälen

Supervisors: Dr. Snezana Maljevic, Prof. Dr. Holger Lerche

Julia Knaus

Funktionelle Analyse von GABRA5 Mutationen bei idiopathischer generalisierter Epilepsie

Supervisors: Dr. Snezana Maljevic, Prof. Dr. Holger Lerche

Guest Researchers

Sandra Kruszynski (PATE)

Host: Dr. Henner Koch

Kevin Klett

Hosts: Prof. Dr. Y. Weber, Dr. Henner Koch

Florian Lutz

Hosts: Prof. Dr. Y. Weber, Dr. Henner Koch



Department of Neuro- degenerative Diseases



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Prof. Dr. Walter Maetzler
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 Hanna Hentrich
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 Max Hollweck
 Svenja Hucker
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 Christoph Kessler
 Johannes Klemt
 Rosa Klotz
 Anika Koch
 Sebastian Kormeier
 Lena Kuhn
 Ebru Kusku
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Annegret Leuser
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 Beatriz Molina Martínez
 Selina Reich
 Ulrike Ulmer

DIPLOMA STUDENTS

Sonja Golombek
 Philip Höflinger
 Max Güldner
 Christiane Halder
 Rahel Lewin

Clinical Studies

Promesa: Double blind, randomised, prospective placebo controlled parallel group phase III study to investigate the effect of EGCG supplementation on disease progression of patients with multiple system atrophy.

Investigators: Dr. Eva Schäffer, Prof. Dr. Daniela Berg

Kyowa 6002-14: A 12-week, double-blind, placebo-controlled, randomized, multicenter, phase III study to evaluate the efficacy of oral Istradefylline 20 and 40 mg/day as a treatment for patients with moderate to severe Parkinson's disease.

Investigators: Dr. Eva Schäffer, Prof. Dr. Daniela Berg

NIS-Azilect: In Azilect® Wearing -Off (aiwo) – Evaluation of symptomatic efficacy and tolerability of rasagiline (Azilect®) in PD patients with wearing-off / end-of-dose akinesia, using the wearing-off Questionnaires -32 (WOQ -32) in daily practice.

Investigators: Dr. Eva Schäffer, Prof. Dr. Daniela Berg

PD0013-Neupart: A multicenter non-interventional study to evaluate the effectiveness of Neupro® (rotigotin transdermal patch) and levodopa combination therapy in patients with Parkinson's disease.

Investigators: Dr. Eva Schäffer, Prof. Dr. Daniela Berg

NIC-PD: A randomized, placebo-controlled, double-blind, multicenter study to evaluate a possible disease-modifying effect of transdermal nicotine applique (nicotine patches) in early stages of Parkinson's disease.

Investigators: Dr. Isabel Wurster, Prof. Dr. Daniela Berg

Ergotherapie bei Essentiellem Tremor (ET): A monocenter single blind study to evaluate the symptomatic effect of ergotherapy on ET

Investigators: Dr. Isabel Wurster, Prof. Dr. Daniela Berg

Ergotherapie bei Parkinson (PD): A monocenter single blind study to evaluate the symptomatic effect of ergotherapy on PD

Investigators: Dr. Eva Schäffer, Prof. Dr. Daniela Berg

Training PD: A monocenter center study assessing the clinical and neuroimaging effect of various trainings (physiotherapy, brain games, exergaming) in PD.

Investigators: Dr. Eva Schäffer, Dr. Benjamin Roeben, Prof. Dr. Daniela Berg

MODEP (Modeling Epidemiological Data to study Parkinson's disease progression): Monocenter longitudinal observational study in Parkinson's disease

Investigators: group of Prof. Dr. Walter Maetzler and Prof. Dr. Daniela Berg

PPMI – The Parkinson's Progression Markers Initiative (please see: <http://www.ppmi-info.org/>)

multicenter longitudinal observational study in PD
Investigators: group of Prof. Dr. Daniela Berg

P-PPMI (please, see also: Fox-Trial-Finder): **Prodromal Parkinson's Progression Markers Initiative:** Multicenter longitudinal observational study in individuals at risk for PD
Investigators: group of Prof. Dr. Daniela Berg

ABC-PD: monocenter longitudinal study on the predictive value of CSF abeta-pathology for PD dementia.

Investigators: Dr. Inga Liepelt and group of Prof. Dr. Daniela Berg

DEMPARK / LANDSCAPE: multicenter longitudinal observational study on dementia in Parkinson's disease.

Investigators: Dr. Inga Liepelt and group of Prof. Dr. Daniela Berg

TREND-Studie (Tübingen evaluation of Risk factors for Early detection of NeuroDegeneration): Monocenter longitudinal observational study on individuals at high risk for PD to determine the value of risk, prodromal and progression markers in the prodromal phase.

Please, see also: <http://www.trend-studie.de/english/>
Investigators: group of Prof. Dr. Walter Maetzler and Prof. Dr. Daniela Berg

iMed-Studies: Within this German-wide project, Tübingen is involved in several studies to understand the relation of Parkinson's disease and diabetes.

These include:

- 1) Serologic infectious markers and oral microbiom in relation to neuro-degenerative diseases and HbA1c values
- 2) Evaluation of the influence of diabetes and prediabetes on cognitive markers
- 3) Genomic stratification of a subgroup of PD patients with diabetes
- 4) Evaluation of hypoglycemia and cognitive decline in a cohort of diabetes patients
- 5) Association of plasma Aβ40 peptides with coronary artery disease and diabetes mellitus

- 6) Targeted proteomics for prediction of diabetes and neurodegeneration
- 7) Changes in carbohydrate intake in PD
- 8) Metabolomics in PD-Patients with Diabetes. A cooperation with CETICS Health Solutions GmbH
Investigators: Dr. Eva Schäffer, Dr. Benjamin Roeben, Prof. Dr. Daniela Berg

MIGAP: (Markers in GBA-associated PD) multicenter study of the DZNE to detect biomarkers and protective factors in GBA-associated PD.
Investigators: Dr. Kathrin Brockmann, Claudia Schulte, Prof. Dr. Daniela Berg

A phase III, randomised, double-blind and open label phase, active and placebo controlled study comparing the short term efficacy of two formulations of clostridium botulinum type A toxin (Dysport and Dysport RU) to placebo, and assessing the short and long term efficacy and safety of Dysport RU following repeated treatments of subjects with cervical dystonia (CD). (IPSEN N°Y-52-52120-134.)
Investigators: Dr. Tobias Wächter, Dr. Kathrin Brockmann, Prof. Dr. Thomas Gasser

A94-52120-165: A national, multicenter, non-interventional, prospective, longitudinal study of treatment with botulinum toxin A injections in previously treated or untreated patients with cervical dystonia (Dysport®).
Investigators: Dr. Tobias Wächter, Dr. Katerina Freitag, Prof. Dr. Thomas Gasser

A 94-52120-174: An international, multicenter, non-interventional, prospective, longitudinal study to investigate the effectiveness of botulinum toxin A (Dysport®) injections in patients suffering from post-stroke arm spasticity with respect to early, medium or late start of treatment.
Investigators: Dr. Katerina Freitag, Prof. Dr. Thomas Gasser

AGN191622: BOTOX prophylaxis in chronic migraine. An international, multicentre, non-interventional, prospective study of treatment with botulinum toxin A injections in patients with chronic migraine.
Investigators: Dr. Katerina Freitag, Prof. Dr. Thomas Gasser

Y-79-52120-166: An international observational prospective study on long-term response to botulinum toxin type a (BoNT-A) injections in subjects suffering from idiopathic cervical dystonia (CD) – pharmaco-economic impact (INTEREST IN CD2).
Investigators: Dr. Katerina Freitag, Prof. Dr. Thomas Gasser

Multicenter evaluation of the effect of botulinum toxin therapy on quality of life: A multicenter, non-interventional, prospective study to investigate the effect of botulinum toxin therapy on quality of life in previously not treated patients with various neurological diseases.
Investigators: Dr. Katerina Freitag, Prof. Dr. Thomas Gasser

EarlyStim – Post study follow up: The effect of deep brain stimulation of the subthalamic nucleus (STN-DBS) on quality of life in comparison to best medical treatment in patients with complicated Parkinson's disease and preserved psychosocial competence.
Investigators: Prof. Dr. Rejko Krüger, Dr. Daniel Weiss

StimCP – Effect of deep brain stimulation in the globus pallidus internus on the quality of life of young patients with dyskinetic cerebral palsy (CP)
Investigators: Prof. Dr. Rejko Krüger, Dr. Daniel Weiss

Health-related quality of life in LCIG-treated and LCIG-amenable Patients with continued oral dopaminergic therapy. Non-interventional, multicentre observational trial for levodopa-carbidopa gel (LCIG) in Germany – BALANCE
Investigators: Dr. Daniel Weiss

Functional electrical stimulation in hereditary spastic paraplegia
Investigators: Dr. Rebecca Schüle, Dr. Tim Rattay, Prof. Dr. Ludger Schöls

Statin Treatment of Oxysterol Pathology in SPG5 (STOP SPG5)
Investigators: Dr. Rebecca Schüle, Dr. Tim Rattay, Prof. Dr. Ludger Schöls

Physiotherapie bei Hereditärer Spastischer Spinalparalyse (HSP)
Investigators: Dr. Rebecca Schüle, Dr. Tim Rattay, Prof. Dr. Ludger Schöls

Natural history in Hereditary Spastic Paraplegia (HSP registry)
Investigators: Dr. Rebecca Schüle, Dr. Sarah Wiethoff, Prof. Dr. Ludger Schöls

European Friedreich's Ataxia Consortium for Translational Studies (EFACTS)
Investigators: Prof. Dr. Ludger Schöls, Dr. Jennifer Just, Prof. Dr. Jörg Schulz (Aachen)

Sporadic ataxia with adult onset: Natural history study (SPORTAX)

Investigators: Prof. Dr. Ludger Schöls, Dr. Matthis Synofzik, Prof. Dr. Thomas Klockgether (Bonn)

Early onset ataxia: Genetic basis and natural history (EOA)

Investigators: Dr. Matthis Synofzik, Prof. Dr. Ludger Schöls

MOVE' n UP: Video game-based coordinative training for children with advanced degenerative ataxia

Investigators: Dr. Matthis Synofzik, Dr. Winfried Ilg

Detecting PreAtaxia: A mixed challenge strategy to identify ataxia at its preclinical stage

Investigators: Dr. Matthis Synofzik, Dr. Winfried Ilg

A randomised delayed entry trial of intensive home-based speech therapy in spinocerebellar ataxias

Investigators: Dr. Matthis Synofzik, Dr. Adam Vogel (University of Melbourne)

A randomised delayed entry trial of intensive home-based speech therapy in ARSACS

Investigators: Dr. Matthis Synofzik, Dr. Adam Vogel (University of Melbourne)

Slowing down disease progression in premanifest SCA: a piloting interventional exergame trial (SlowSCA)

Investigators: Dr. Matthis Synofzik, Dr. Winfried Ilg

EN-ETPKU: multicenter investigational study on neurodegenerative aspects in patients with phenylketonuria

Investigators: Dr. Andrea Pilotto

Third-Party Funding

ONGOING GRANTS

Landscape

Project leader: Prof. Dr. Daniela Berg

Funding institution: Federal Ministry of Education and Research (BMBF)

JPNP working group “Standardization of biomarker studies in longitudinal studies of Parkinson’s disease”

Project leader: Prof. Dr. Daniela Berg

Funding institution: Federal Ministry of Education and Research (BMBF)

Joint Research Project “Identification of prediction and progression biomarkers in the earliest stages of Parkinson’s Disease (Neuro-D13B)”

Project leader: Prof. Dr. Daniela Berg, Prof. Dr. Walter Mätzler, Prof. Dr. Olaf Riess (UKT)

Funding institution: Federal Ministry of Education and Research (BMBF), UCB Pharma GmbH

OPTIMED

Project leader: Prof. Dr. Daniela Berg

Funding institution: Federal Ministry for Economic Affairs and Energy

Cerebral networks for gait and balance in the prodromal phase of Parkinson’s disease: An fMRI study

Project leader: Prof. Dr. Daniela Berg

Funding institution: Interdisciplinary Center for Clinical Research – IZKF-Promotionskolleg, University of Tübingen

NIC-PD

Project leader: Prof. Dr. Daniela Berg

Funding institution: Philipps-University Marburg

Promesa Study

Project leader: Prof. Dr. Daniela Berg

Funding institution: Ludwig-Maximilians-University Munich

dPV Research Grant “Cognitive control as a key function of urinary incontinence in patients with MP”

Project leader: Prof. Dr. Daniela Berg

Funding institution: dPV – Deutsche Parkinsonvereinigung e.V.

Fox Trial Finder 2014

Project leader: Prof. Dr. Daniela Berg

Funding institution: Michael J. Fox Foundation for Parkinson’s Research

PPMI – The Parkinson’s Progression Initiative*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Michael J. Fox Foundation for Parkinson’s Research (MJFF)

PPMI – Amendment: Genetic PPMI*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Michael J. Fox Foundation for Parkinson’s Research (MJFF)

PPMI Amendment – Cognitive categorization assessment*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Michael J. Fox Foundation for Parkinson’s Research (MJFF)

PPMI Amendment – Additional PD subjects*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Michael J. Fox Foundation for Parkinson’s Research (MJFF)

Inclusion of Resting State MRI: A Parkinson’s Progression Markers Initiative (PPMI) Substudy*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Michael J. Fox Foundation for Parkinson’s Research (MJFF)

P-PPMI – Prodromal subjects*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Michael J. Fox Foundation for Parkinson’s Research (MJFF)

Subaward agreement: Cognition biomarkers*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Mayo Clinic, Michael J. Fox Foundation for Parkinson’s Research (MJFF)

MJFF Research Grant 2011: Gait and motor symptoms in healthy asymptomatic relatives of patients with PD carriers of mutations in the LRRK2 gene*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Michael J. Fox Foundation for Parkinson’s Research (MJFF)

Subaward agreement: Penetrance of LRRK2 in the MJFF LRRK2 consortium*Project leader: Prof. Dr. Daniela Berg*

Funding institution: University of Columbia, Michael J. Fox Foundation for Parkinson’s Research (MJFF)

MJFF Research Grant 2013 – Influence of immune subtypes on the LRRK2 phenotype*Project leader: Prof. Dr. Daniela Berg, Prof. Dr. Walter Maetzler*

Funding institution: Michael J. Fox Foundation for Parkinson’s Research (MJFF)

Research Grant “Pathophysiological mechanisms of prodromal motor changes in individuals at risk for Parkinson’s disease”*Project leader: Prof. Dr. Daniela Berg*

Funding institution: International Parkinson’s Fond

DAT-Imaging in LRRK2 gene carriers*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Institute of Neurodegenerative Disorders, New Haven

Progression markers in the suspected premotor phase and early Parkinson’s disease (Amendment)*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Janssen Pharmaceutica NV

PMPP – Amendment 4*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Janssen Pharmaceutica NV

Observational study in non-demented patients with Parkinson’s disease with lowered A-beta1-42 CFS levels*Project leader: Prof. Dr. Daniela Berg, Prof. Dr. Walter Mätzler*

Funding institution: Janssen Pharmaceutica NV

Kyowa-Study 6002-14*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Kyowa Hakko Kirin Pharma

NIS-Azilect*Project leader: Prof. Dr. Daniela Berg*

Funding institution: TEVA Pharma GmbH

Agreement for a non-product related investigator initiated study*Project leader: Prof. Dr. Daniela Berg*

Funding institution: UCB

Studie PD0013-Neupart*Project leader: Prof. Dr. Daniela Berg*

Funding institution: UCB Biosciences GmbH

Third-Party Funding

ONGOING GRANTS

Tumorigenesis in LRRK2 associated Parkinson's disease

*Project leader: Prof. Rachel Saunders-Pullman,
Dr. Saskia Biskup*

Funding institution: Michael J. Fox Foundation for Parkinson's Research

Monocyte monitoring in LRRK2 associated Parkinson's disease

Project leader: Prof. Dr. Thomas Gasser, Dr. Saskia Biskup

Funding institution: Michael J. Fox Foundation for Parkinson's Research

Functional proteomics of mutant LRRK2 induced Parkinson's disease

*Project leader: Prof. Dr. Thomas Gasser,
Dr. Jared Sternecker (MPI)*

Funding institution: German Research Foundation (DFG)

Mitochondrial endophenotypes of PD (Mito-PD)

*Project leader: Prof. Dr. Thomas Gasser (coordinator),
Prof. Dr. Rejko Krüger, Prof. Dr. Daniela Berg*

Funding institution: Federal Ministry of Education and Research (BMBF)

Comprehensive unbiased risk factor assessment for genetics and environment in Parkinson's disease (COURAGE-PD)

*Project leader: Prof. Dr. Thomas Gasser (coordinator),
Prof. Dr. Rejko Krüger*

Funding institution: Federal Ministry of Education and Research (BMBF)

Multimodal imaging of rare synucleinopathies (MultiSyn)

Project leader: Prof. Dr. Thomas Gasser (coordinator)

Funding institution: EU

Protein interaction network analysis and pathway modeling for LRRK2

*Project leader: Prof. Dr. Thomas Gasser, Dr. Jared Sternecker (MPI),
Dr. Christian Johannes Gloeckner (Eberhard Karls University Tübingen)*

Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Assessing the role of LRRK2 in sporadic PD pathology using iPSC-derived dopaminergic neurons

*Project leader: Prof. Dr. Thomas Gasser, Dr. Jared Sternecker (MPI),
Dr. Christian Johannes Gloeckner (Eberhard Karls University Tübingen)*

Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Investigation of molecular and cellular functions of TDP-43 and FUS, pathorelevant proteins in frontotemporal dementias (FTD) and amyotrophic lateral sclerosis (ALS)

Project leader: Prof. Dr. Philipp Kahle

Funding institution: German Research Foundation (DFG)

Competence Net Degenerative Dementias & Frontotemporal Dementias

Project leader: Prof. Dr. Philipp Kahle

Funding institution: Federal Ministry of Education and Research (BMBF)

Virtual Institute: RNA dysmetabolism in ALS and FTD

Project leader: Prof. Dr. Philipp Kahle

Funding institution: German Center for Neurodegenerative Diseases (DZNE)

Intersite Project: Compound screen to correct mitochondrial phenotypes in recessive Parkinson's disease

Project leader: Prof. Dr. Philipp Kahle

Funding institution: German Center for Neurodegenerative Diseases (DZNE)

Mitochondria in neurodegeneration and ageing – translating impaired mitochondrial dynamics to novel therapeutic strategies

Project Leader: Prof. Dr. Rejko Krüger, Prof. Dr. Philipp Kahle

Funding Institution: German Center for Neurodegenerative Diseases (DZNE)

Assessment of LRRK2 kinase activity in peripheral blood cells

*Project leader: Prof. Dr. Thomas Gasser, Prof. Dr. Philipp Kahle,
Dr. Kathrin Brockmann*

Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Investigation of ubiquitination and phosphorylation events in the process of mitophagy

Project leader: Dr. Sven Geisler

Funding institution: Fortüne Programme, University of Tübingen

The importance of DJ-1 for the regulation of mitochondrial dynamics and autophagy in murine and human neuronal models of Parkinson's disease

Project leader: Prof. Dr. Thomas Gasser, Prof. Dr. Rejko Krüger
Funding institution: German Research Foundation (DFG)

Mitochondria in neurodegeneration and ageing – translating impaired mitochondrial dynamics to novel therapeutic strategies

Project Leader: Prof. Dr. Rejko Krüger, Prof. Dr. Philipp Kahle
Funding Institution: German Center for Neurodegenerative Diseases (DZNE)

Polyglutamine repeats and Parkinson's disease

Project leader: Prof. Dr. Thomas Gasser, Prof. Dr. Rejko Krüger, Dr. Manu Sharma
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Combined interleaved stimulation of STN and SNr for mobility impairment related to freezing of gait: design of a randomized controlled phase IIb clinical trial

Project leader: Dr. Daniel Weiss, Prof. Dr. Alireza Gharabaghi, Prof. Dr. Rejko Krüger, Dr. Georgios Naros
Funding institution: Medtronic

Pathological hypersynchronization of spinal antagonistic motoneurons as a possible mechanism of bradykinesia and freezing phenomena in Parkinson's disease

Project leader: Dr. Daniel Weiss
Funding institution: German Research Foundation (DFG)

Nigral stimulation for freezing of gait: clinico-anatomic correlations in the Tübingen cross-over RCT and open label 12 month follow-up trials

Project leader: Dr. Daniel Weiss, Prof. Dr. Rejko Krüger
Funding institution: Medtronic

SLC9A6/NHE6 in neurodegeneration in corticobasal syndrome

Project leader: Dr. Julia Fitzgerald
Funding institution: Fortune Programme, University of Tübingen

Moving beyond

Project leader: Prof. Dr. Walter Maetzler
Funding institution: EU Seventh Framework Programme (FP7)

Quantitative analysis of step initiation in the idiopathic Parkinson's syndrome

Project leader: Prof. Dr. Walter Maetzler
Funding institution: Interdisciplinary Center for Clinical Research (IZKF)

Development of a screening tool for the treatment of chronic migraine with botulinum toxin

Project leader: Dr. Tobias Waechter
Funding institution: Pharm-Allergan

Genetic disorders in Arab societies of Israel and the Palestinian authorities

Project leader: Prof. Dr. Ludger Schöls
Funding institution: German Research Foundation (DFG)

mitoNET: Fission and fusion in mitochondrial diseases

Project leader: Prof. Dr. Ludger Schöls, Prof. Dr. Doron Rapaport (UKT)
Funding institution: Federal Ministry of Education and Research (BMBF)

Nosology and molecular diagnosis of the degenerative recessive ataxias (EUROSCAR)

Project leader: Prof. Dr. Ludger Schöls, Prof. Dr. Peter Bauer (UKT)
Funding institution: EU

Integrated European Project on Omics Research of Rare Neuromuscular and Neurodegenerative Diseases (NEUROMICS): Diagnosis and therapy project of Rare Neuromuscular and Neurodegenerative Diseases (NEUROMICS)

Project leader: Prof. Dr. Ludger Schöls, Prof. Dr. Olaf Rieß (UKT)
Funding institution: EU

Genetic basis of hereditary spastic paraplegias

Project leader: Prof. Dr. Ludger Schöls, Dr. Rebecca Schüle
Funding institution: HSP Support Group; Germany e.V.

27 hydroxy-sterol toxicity in the pathophysiology of SPG5

Project leader: Prof. Ludger Schöls, Dr. Rebecca Schüle
Funding institution: HSP Support Group; Germany e.V.

Next generation genetics of axonopathies

Project leader: Dr. Rebecca Schüle
Funding institution: EU

Third-Party Funding

ONGOING GRANTS

Efficacy of read-through substances at nonsensemutation at HSP

Project leader: Dr. Rebecca Schüle, Prof. Dr. Ludger Schöls

Funding institution: Förderverein für HSP-Forschung

Falls in neurogeriatric high-risk patients: Predictors, fall pattern and relation to activities of daily living

Project leader: Dr. Matthias Synofzik

Funding institution: Interdisciplinary Center for Clinical Research (IZKF)

Next-generation genetics of early-onset ataxias

Project leader: Dr. Matthias Synofzik

Funding institution: Interdisciplinary Center for Clinical Research (IZKF), Fortüne Programme

Detecting PreAtaxia: A mixed challenge strategy to identify ataxia at its preclinical stage.

Project leader: Dr. Matthias Synofzik

Funding institution: Interdisciplinary Center for Clinical Research (IZKF)

A randomised delayed entry trial of intensive home-based speech therapy in Friedreich ataxia

Project leader: Dr. Matthias Synofzik

Funding institution: Centre for Rare Diseases, Tübingen

A randomised delayed entry trial of intensive home-based speech therapy in spinocerebellar ataxias

Project leader: Dr. Matthias Synofzik

Funding institution: German Heredo-Ataxia Society

Predicting falls and fall patterns in the elderly: A comparative investigation of neurogeriatric high-risk groups

Project leader: Dr. Matthias Synofzik

Funding institution: Robert-Bosch-Foundation

A randomised delayed entry trial of intensive home-based speech therapy in ARSACS

Detecting PreAtaxia: A mixed challenge strategy to identify ataxia at its preclinical stage.

Project leader: Dr. Matthias Synofzik

Funding institution: Fondation de l'Ataxie Charlevoix, Saguenay

Targeted massively parallel ataxia gene sequencing (ataxia gene panel) as a novel diagnostic tool for broad NPC1/NPC2 screening in unexplained ataxia patients with early onset

Project leader: Dr. Matthias Synofzik

Funding institution: Actelion Pharmaceuticals

NEW GRANTS

Effects of various training activities on symptoms and adaptive brain plasticity in patients with idiopathic PD

Project leader: Prof. Dr. Daniela Berg

Funding institution: AKF (Applied Clinical Research) program, University of Tuebingen

Neurologic and psychiatric assessment of middle-aged (> 30 y) early-treated Phenylketonuria patients (ETPKU): a pilot-study to assess the risk of Early Neurodegeneration (EN-ETPKU Study)

Project leader: Prof. Dr. Daniela Berg

Funding institution: District clinics Reutlingen

Fox Trial Finder – partial financing

Project leader: Prof. Dr. Daniela Berg

Funding institution: German Parkinson Society (DPG)

Fox Trial Finder 2015

Project leader: Prof. Dr. Daniela Berg

Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Fox Trial Finder 2016

Project leader: Prof. Dr. Daniela Berg

Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

PPMI Amendment 9

Project leader: Prof. Dr. Daniela Berg

Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Validation study on the MDS clinical criteria of Parkinson's disease

Project leader: Prof. Dr. Daniela Berg

Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Cognitive Pretesting within the Validation Study on MDS Clinical Diagnostic Criteria for PD

Project leader: Prof. Dr. Daniela Berg

Funding institution: International Parkinson and Movement Disorder Society (MDS)

An exploratory study assessing TMS plasticity deficits in patients with AD and aMCI in comparison to healthy controls

Project leader: Prof. Dr. Ulf Ziemann, Prof. Dr. Daniela Berg, Prof. Dr. Christoph Laske

Funding institution: Janssen Pharmaceutica NV

Kyowa-Study 6002-14 – Amendment

Project leader: Prof. Dr. Daniela Berg

Funding institution: Kyowa Hakko Kirin Pharm

OPTIMED-GMP Preparation

Project leader: Prof. Dr. Daniela Berg

Funding institution: Novartis Pharma GmbH

Predictive and progression markers in Parkinson's disease for earlier and more specific treatment

Project leader: Prof. Dr. Daniela Berg, Prof. Dr. Walter Maetzler

Funding institution: H. Lundbeck A/S

Joint Research Project MitoPD – Mitochondrial Endophenotypes of Parkinson's Disease (Sub-project A)

Project leader: Prof. Dr. Thomas Gasser, Prof. Dr. Daniela Berg, Prof. Dr. Rejko Krüger

Funding institution: Federal Ministry of Education and Research (BMBF)

Towards a unifying theory of Parkinson's disease: Investigation of the biochemical and genetic role of Rab GTPases

Project leader: Prof. Dr. Thomas Gasser

Funding institution: Centers of Excellence Network (CoEN)

Genetic basis of Dystonia in Turkish families

Project leader: Prof. Dr. Thomas Gasser, Dr. Ebba Lohmann

Funding institution: German Research Foundation (DFG)

Understanding the molecular pathogenesis of GBA1-associated Parkinson's disease by using engineered induced pluripotent stem cells

Project leader: Dr. Michela Deleidi

Funding institution: German Research Foundation (DFG)

Decipher the Complexity and Plasticity of Epigenomic Characteristics Under Influence of Environmental Factors in the Pathomechanistic Regulation of Parkinson's Disease (decipherPD)

German-Canadian-French Joint Transnational Project „Epigenomics of Complex Diseases“

Project Leader: Prof. Dr. Philipp Kahle

Funding Institution: Federal Ministry of Education and Research (BMBF)

TWINNING for a Center for Diagnosis and Treatment of Parkinson's disease (Tübingen, Oxford, Luxembourg)

Project Leader: Prof. Dr. Rejko Krüger, Prof. Dr. Thomas Gasser

Funding Institution: European Research Council – Horizon2020

E-RARE composite NEURO LIPID: Role of lipid metabolism hereditary spastic paraplegia in the pathogenesis: genes, biomarkers and therapeutic models

Project leader: Dr. Rebecca Schüle

Funding institution: EU

Statin Treatment of Oxysterol Pathology in SPG5 (STOP SPG5)

Project Leader: Dr. Rebecca Schüle, Prof. Dr. Ludger Schöls

Funding institution: Eva-Luise und Horst Köhler Stiftung

Entwicklung und Evaluation eines modularen Physiotherapiekonzepts für Patienten mit Hereditärer Spastischer Spinalparalyse (HSP)

Project leader: Dr. Rebecca Schüle, Prof. Ludger Schöls

Funding institution: Förderverein für HSP-Forschung e.V.

Aufbau eines Web-basierten HSP-Registers

Project Leader: Dr. Rebecca Schüle, Prof. Dr. Ludger Schöls

Funding institution: HSP Support Group; Germany e.V.

Natural history in Hereditary Spastic Paraplegia

Project Leader: Dr. Rebecca Schüle, Prof. Dr. Ludger Schöls

Funding institution: HSP Support Group; Germany e.V.

Alliance for Treatment in HSP and PLS

Project leader: Dr. Rebecca Schüle

Funding institution: Spastic Paraplegia Foundation Inc.

Clinical Research in ALS and Related Disorders for Therapeutic Development (CRaTE) Consortium

Project leader: Dr. Rebecca Schüle

Funding institution: National Institutes of Health (NIH)

Third-Party Funding

NEW GRANTS

Slowing down disease progression in premanifest SCA: A piloting interventional exergame trial (SlowSCA)

Project leader: PD Dr. Matthis Synofzik

Funding Institution: Center for Rare Diseases, Tübingen

Implementation of registry- and biobank-based patient and expert network for early-onset ataxias

Project leader: Project leader: PD Dr. Matthis Synofzik

Funding Institution: Actelion Pharmaceuticals

Solving the unsolved: Next generation genomics of early-onset ataxia (NextGenATAX)

Project leader: Project leader: PD Dr. Matthis Synofzik

Funding Institution: Else Kröner Fresenius Stiftung

Awards

Dr. Sebastian Heinzel

MDS Travel Grant for 19th International Congress of Parkinson's Disease and Movement Disorders, 2015 in San Diego, USA.

Dr. Carola Rotermund

Journal of Neurochemistry

First follow up Mark A. Smith Prize (Cairns, Australia)

Dr. Daniel Weiss

Research Prize of the German Parkinson Foundation 2015

PhD Theses

(Completed in 2015)

Martin Kuß

Interferon gamma induces leucine-rich repeat kinase LRRK2 via extracellular signal-regulated kinase ERK5

Supervisor: Prof. Dr. Philipp Kahle

Carolin Obermaier

Identification of the underlying mechanism of the C.192G>C mutation in the DJ-1 gene and functional characterization in patient-based cellular models of Parkinson's disease ex vivo

Supervisor: Prof. Dr. Rejko Krüger

Medical Theses

(Completed in 2015)

Carolin Bellut

Exekutivfunktionen und Priorisierung während des Geradeaus-Gehens und Drehens unter erschwerten Dual Task Bedingungen

Supervisor: Prof. Dr. Walter Maetzler

Stefanie Brand

Bildgebende Marker für die manifeste und prodromale Phase der Parkinson-Erkrankung in LRRK2-Mutationsträgern

Supervisor: Prof. Dr. Daniela Berg

Sarah Dilger

Demographische und klinische Aspekte in Bezug zu Risiko-Allelen bei Lewykörper-Erkrankungen: Ein genetisch-klinisch-biochemischer Ansatz

Supervisor: Prof. Dr. Walter Maetzler

Sandra Hasmann

Quantitative Tests des statischen Gleichgewichts in der Prodromalphase des Parkinson-Syndroms

Supervisor: Prof. Dr. Walter Maetzler

Madeleine Heim

Verlaufsuntersuchung zur Evaluation des subkortikalen und kortikalen dopaminergen Stoffwechsels mittels [123I] FP-CIT SPECT in der Frühphase des Idiopathischen Parkinsonsyndroms

Supervisor: Prof. Dr. Daniela Berg

Rosa Klotz

Cortical and corticomuscular oscillatory synchronizations with externally paced finger movements in healthy subjects and Parkinson's disease patients with deep brain stimulation.

Supervisor: Dr. Daniel Weiss/Prof. Dr. Rejko Krüger

Annegret Leuser

Quantitative motorische Analysen und der Einfluss von Kognition in Parkinsonpatienten mit und ohne Mutation im LRRK2 Gen sowie gesunden Mutationsträgern

Supervisor: Prof. Dr. Daniela Berg

Mirjam Mächtel

Accelerometer-basierte Quantifizierung von Gehen mit und ohne Dual tasking bei Parkinson-Patienten: Eine Quer- und Längsschnittstudie

Supervisor: Prof. Dr. Walter Maetzler

Natalie Philipp

Die REM-Schlafstörung als Früh- und Progressionsmarker der Parkinsonerkrankung

Supervisor: Prof. Dr. Daniela Berg

Ellen Riedel

Klassifikation von kognitiven Störungen bei Morbus Parkinson – eine Verlaufsstudie

Supervisor: Prof. Dr. Daniela Berg

Benjamin Roeben

Risk stratification for Parkinson's and Alzheimer's disease by means of Transcranial Sonography in comparison with cardiovascular risk factors

Supervisor: Prof. Dr. Daniela Berg

Diploma/Master Theses

(Completed in 2015)

Friederike Klumpp

Sind subjektive kognitive Verschlechterungen assoziiert mit geringeren CSF Amyloid-Beta42-Werten im Liquor bei nicht-dementen Parkinsonpatienten?

Supervisor: Prof. Dr. Daniela Berg

Beatriz Molina Martinez

Characterization of epigenetic changes in the brain of a transgenic mouse model for alpha-synucleinopathy

Supervisor: Prof. Dr. Philipp Kahle

Selina Reich

Investigating the role of GBA1 in Parkinson's disease by CRISPR/Cas9 genome editing in human induced pluripotent stem cells

Supervisor: Dr. Dr. Michela Deleidi

Madeline Jäggle

Using iPSC-derived monocytes and macrophages as a model to investigate Parkinson's disease pathogenesis

Supervisor: Dr. Dr. Michela Deleidi

Guest Researchers

Dr. Gustavo Kellermann Reolon, Brasil

Host: Prof. Dr. Philipp Kahle

Andrea Pilotto, Italy

Host: Prof. Dr. Daniela Berg

Dr. Naoto Sugeno, Japan

Host: Prof. Dr. Philipp Kahle

Department of Cognitive Neurology



Clinical and Scientific Staff

HEAD OF THE DEPARTMENT

Prof. Dr. Peter Thier

GROUP LEADERS/ATTENDING PHYSICIANS

Prof. Dr. Martin Giese
Dr. Marc Himmelbach
Prof. Dr. Uwe Ilg
Prof. Dr. Dr. Hans-Otto Karnath
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PD Dr. Fahad Sultan

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Dr. Marissa Barabas
Dr. Alia Benali
Dr. Shubhodeep Chakrabarti
Dr. Enrico Chiovetto
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Dr. Peter Dicke
Dr. Winfried Ilg
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PHD DOCTORAL STUDENTS

André Maia Chagas
 Ian Chong
 Sonja Cornelsen
 Leonid Fedorov
 Martina Feierabend
 Julian Hofmann
 Mohammad Hovaidi Ardestani
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 Maike van Lessen
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MEDICAL DOCTORAL STUDENTS

Friedemann Bender
 Maria Bither
 Maria Sophie Breu
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 Carolin Holzbaur
 Karla Lauer
 Julian Meßner
 Kira Marquardt
 Evgeny Sheygal
 Tine Stoll
 Thekla Zekos

MASTER STUDENTS

Anna-Lena Bleyer
 Silvia de Maglie
 Mareike Gann
 Anne Kirschner
 Junru Li
 Sophie Laternus
 Ulrike Neumann
 Florian Ott
 Katrina Quinn
 Katharina Rischer
 Matthias Uhl

Clinical Studies

PreAtaxia: Changes in the control of posture and gait in pre-symptomatic and pre-clinical stages of degenerative cerebellar ataxia

Investigators: Dr. Winfried Ilg, Zofia Fleszar, Cornelia Schatton, Prof. Dr. Martin Giese, Prof. Dr. Ludger Schöls, Dr. Matthias Synofzik

Motor Training in pre-clinical stages of degenerative cerebellar ataxia

Investigators: Dr. Winfried Ilg, Cornelia Schatton, Prof. Dr. Martin Giese, Prof. Dr. Ludger Schöls, Dr. Matthias Synofzik

Examination of the influence of visual feedback on real and pantomimed object use in apraxia

Investigators: Andrea Christensen, Dr. Winfried Ilg, Prof. Dr. Martin Giese, Prof. Dr. Dr. Hans-Otto Karnath, Christoph Sperber

Contributions of parietal cortex to the perception of self-action

Investigators: Dr. Matthias Synofzik, Dr. Marc Himmelbach, PD Dr. Axel Lindner

Examination of the specific influence of areas in the cerebellum on learning to control a dynamical system

Investigators: Nicolas Ludolph, Prof. Dr. Dagmar Timmann, Prof. Dr. Martin Giese, Dr. Winfried Ilg

Videogame-based coordinative training in children with degenerative ataxia

Investigators: Dr. Winfried Ilg, Dr. Matthias Synofzik, Prof. Dr. Martin Giese, Prof. Dr. Ludger Schöls

Cerebellar ataxia as a loss of precise velocity duration trade-off

Investigators: Julian Meßner, Akshay Markanday, Prof. Dr. Hans-Peter Thier

Disparate substrates for gaze following and face perception

Investigators: Dr. Peter Dicke, Kira Marquardt, Hamidreza Ramezani, Prof. Dr. Hans-Peter Thier

Auf kooperative Augen kommt es an – neuronale Grundlagen sozialer Interaktionen

Investigators: Dr. Peter Dicke, Maria Sophie Breu, Hamidreza Ramezani, Prof. Dr. Hans-Peter Thier

Neurobiologische Grundlagen der Emotionserkennung aus menschlichen Gangsequenzen bei Gesunden und Patienten mit psychischen Erkrankungen

Investigators: Ann-Christine Ehlis, Andrea Christensen, Prof. Dr. Andreas Fallgatter, Prof. Dr. Martin A. Giese

Examination of the influence of the cerebellum on the interaction between action and perception

Investigators: Dr. Winfried Ilg, Andrea Christensen, Prof. Dr. Martin Giese, Prof. Dr. Dagmar Timmann

Evaluation of object functionality and mechanical reasoning in humans

Investigators: Dr. Marc Himmelbach, Prof. Dr. Dr. Hans-Otto Karnath

Affective biological motion recognition in schizophrenia

Investigators: Prof. Dr. Martin Giese, Andrea Christensen und externe Partner

‘Gaze Following’ bei Autismus-Spektrumstörung

Investigators: Manuel Roth, PD Dr. Axel Lindner, Prof. Dr. Hans-Peter Thier

Neuronale Grundlagen der Integration geometrischer und kontextabhängiger Information zur Ausrichtung sozialer Aufmerksamkeit

Investigators: Dr. Peter Dicke, Prof. Dr. Hans-Peter Thier

Propriozeptive Defizite bei autosomal-rezessiv hereditären Ataxien

Investigators: Dr. Marc Himmelbach, PD Dr. Matthias Synofzik

Third-Party Funding

ONGOING GRANTS

Corticofugal control of brainstem sensory gating in the rodent whisker system

(CH 1232/1-1)

Project leader: Dr. Shubhodeep Chakrabarti

Funding institution: German Research Foundation (DFG)

Selective attention and perceptual awareness: Testing the competitive interaction hypothesis

(HA 5839/3-1)

Project leader: Dr. Bianca de Haan,

Prof. Dr. Dr. Hans-Otto Karnath

Funding institution: German Research Foundation (DFG)

Improving humanoid walking capabilities by human-inspired mathematical models, optimization and learning

(FP7-ICT-2013-10/ 611909 – Koroibot)

Project leader: Prof. Dr. Martin Giese

Funding institution: EU

The Human Brain Project

(FP7-ICT-2013-FET-F/604102 – HBP)

Project leader: Prof. Dr. Martin Giese

Funding institution: EU

Adaptive Brain Computations

(PITN -GA-011-290011 – ABC)

Project leader: Prof. Dr. Martin Giese

Funding institution: EU Training Network (ITN)

Setup and maintenance of the Section for Computational Sensomotrics

(EXC 307 – CIN)

Project leader: Prof. Dr. Martin Giese

Funding institution: German Research Foundation (DFG)

Behavioral characteristics of optic ataxia – doctoral scholarship Sonja Cornelsen

Project leader: Dr. Marc Himmelbach

Funding institution: Landesgraduiertenförderung

Evaluation of object functionality and mechanical reasoning in humans (HI 1371/2-1)

Project leader: Dr. Marc Himmelbach,

Prof. Dr. Dr. Hans-Otto Karnath

Funding institution: German Research Foundation (DFG)

Videogame-based coordinative training in children with degenerative ataxia

Project leader: Dr. Winfried Ilg, Dr. Matthis Synofzik

Funding institution: Oliver-Vaihinger-Fond, Stiftung für kranke Kinder

Investigating body representation distortions in patient population using biometric self-avatars in virtual reality (EXC307-CIN)

Project leaders: Prof. Dr. Betty Mohler, Prof. Dr. Stephan Zipfel,

Prof. Dr. Dr. Hans-Otto Karnath, Dr. Hong Yu Wong,

Prof. Dr. Michael Black

Funding institution: German Research Foundation (DFG)

Mechanisms and disorders in visually controlled every day actions

(KA 1258/15-1)

Project leader: Prof. Dr. Dr. Hans-Otto Karnath,

Prof. Dr. Martin Giese

Funding institution: German Research Foundation (DFG)

National Network of Computational Neuroscience (Bernstein Center): Neural representations of sensory predictions for perception and action – project C4

Project leader: PD Dr. Axel Lindner, Prof. Dr. Martin Giese

Funding institution: Federal Ministry of Education and Research (BMBF)

FG Barrel Cortical Function, TP 6 Neuronal processing of task-specific afferent whisker information in the rat barrel cortex

(SCHW 577/10-2)

Project leader: Prof. Dr. Cornelius Schwarz

Funding institution: German Research Foundation (DFG)

National Network of Computational Neuroscience (Bernstein Center). Imaging neuronal population coding during perception in awake behaving animals – project B2

Project leader: Prof. Dr. Cornelius Schwarz

Funding institution: Federal Ministry of Education and Research (BMBF)

From 3D surface models to the cellular and molecular architecture of the dentate nucleus: characterizing human-typical traits in the cerebellum

(SU 171/3-1)

Project leader: PD Dr. Fahad Sultan

Funding institution: German Research Foundation (DFG)

Third-Party Funding

ONGOING GRANTS

**Research Unit FOR 1847 “Primate Systems Neuroscience” –
Project A3: The role of the cerebellum in saccadic
adaptation as a window into neural mechanisms
of motor learning**

(TH 425/13-1)

Project leader: Prof. Dr. Hans-Peter Thier

Funding institution: German Research Foundation (DFG)

**Research Unit FOR 1847 “Primate Systems Neuroscience” –
Central Office Project**

(TH 425/14-1)

Project leader: Prof. Dr. Hans-Peter Thier

Funding institution: German Research Foundation (DFG)

**Neuronal underpinnings of the executive control of gaze
following – doctoral scholarship Maria Sophie Breu**

(PK 2014-2-09)

Project leader: Prof. Dr. Hans-Peter Thier

Funding institution: Interdisciplinary Center for Clinical
Research Post Graduate Program

Towards the neural basis of joint attention

(TH 425/12-1)

Project leader: Prof. Dr. Hans-Peter Thier

Funding institution: German Research Foundation (DFG)

**National Network of Computational Neuroscience
(Bernstein Center): The inferential nature of visual
motion perception – project C3**

Project leader: Prof. Dr. Hans-Peter Thier,

Prof. Dr. Martin Giese

Funding institution: Federal Ministry of Education
and Research (BMBF)

NEW GRANTS

**Selective attention and perceptual awareness:
Testing the competitive interaction hypothesis**

(HA 5839/4-1)

Project leader: Dr. Bianca de Haan

Funding institution: German Research Foundation (DFG)

CogIMon – Cognitive Interaction in Motion

(EU H2020-ICT-2014 644727)

Project leader: Prof. Dr. Martin Giese

Funding institution: EU

Motor functions and connectivity of the superior colliculus

(HI 1371/1-2)

Project leader: Dr. Marc Himmelbach

Funding institution: German Research Foundation (DFG)

MOOC Methods in clinical research

(F.7312016)

Project participants: Dr. Marc Himmelbach,

Snezana Maljevic, Prof. Dr. Thomas Gasser

Funding Institution: Medical Faculty Tübingen (PROFIL plus)

**Functional and structural magnetic resonance imaging
of the human midbrain at 9.4T – doctoral scholarship**

Joana Loureiro

Project leader: Dr. Marc Himmelbach

Funding Institution: Carl Zeiss Foundation

**Selective attention and perceptual awareness:
Testing the competitive interaction hypothesis**

(KA 1258/20-1)

Project leader: Prof. Dr. Dr. Hans-Otto Karnath,

Dr. Bianca de Haan

Funding institution: German Research Foundation (DFG)

Reorganisation of cognitive functions after stroke

(57106574)

Project leader: Prof. Dr. Dr. Hans-Otto Karnath

Funding institution: The German Academic Exchange
Service (DAAD)

**The role of neocortex in declarative learning:
Function and cellular mechanisms of plasticity in
the primary sensorimotor cortex as bases for the
conditioning of the blink reflex**

(SCHW 577/12-1)

Project leader: Prof. Dr. Cornelius Schwarz

Funding institution: German Research Foundation (DFG)

**The neural correlates of apraxia and the role of feedback
in apraxic errors – doctoral scholarship Christoph Sperber**

Project leader: Prof. Dr. Dr. Hans-Otto Karnath

Funding institution: Friedrich Naumann Foundation

Awards

Prof. Martin Giese

GTC Teaching Award 2015

PhD Theses

(Completed in 2015)

Artin Atabaki

**Experiments on the basis of visuospatial attention in
monkey and man using BOLD fMRI and psy- chophysics**

Supervisor: Prof. Dr. Hans-Peter Thier

Andrea Christensen

**Online interaction of visual perception
and action execution**

Supervisor: Prof. Dr. Martin Giese,

Prof. Dr. Dr. Hans-Otto Karnath

Karolina Marciniak

**Looking at where somebody else is looking at:
Towards understanding the functional and neural
basis of of gaze following**

Supervisor: Prof. Dr. Hans-Peter Thier

Urszula Mihulowicz

**Magnitude and verbal representation of numbers: Spatial
numerical associations and arithmetic fact retrieval based
on evidence from left- and right-brqain damagesd patients**

Supervisor: Prof. Dr. Dr. Hans-Otto Karnath

Christian Waiblinger

**The role of kinematic events in whisker-related tactile
perception**

Supervisor: Prof. Dr. Cornelius Schwarz

MD Theses

(Completed in 2015)

Sebastian Scheidt

Funktionsdiagnostik vestibulärer Reflexe

Supervisor: Prof. Dr. Hans-Peter Thier

Heike Anne Beha

**MRT Veränderungen und Gedächtnisleistungen
bei Patienten mit Multipler Sklerose**

Supervisor: Prof. Dr. Hans-Otto Karnath

Diploma/Master Theses

(Completed in 2015)

Gulnar Aliyeva

Allocentric processing in optic ataxia

Supervisor: Dr. Marc Himmelbach

Anna-Lena Bleyer

Auditoria simultanagnosia

Supervisor: Prof. Dr. Dr. Hans-Otto Karnath

Anne Kirschner

Tool knowledge and mechanical reasoning in patients with apraxia

Supervisor: Dr. Marc Himmelbach

Junru Li

Modulation of the perception of emotional body expression by social interactions

Supervisor: Prof. Dr. Hanspeter Mallot, Prof. Dr. Martin Giese

Ulrike Neumann

Eliciting extinction-like behaviour in healthy subjects

Supervisor: Dr. Bianca de Haan

Katarina Rose Quinn

The role of the parieto-occipital cortex for perceptual grouping

Supervisor: PD Dr. Axel Lindner, Prof. Dr. Christian Braun

Katharina Rischer

Human-likeness and naturalness in motion perception

Supervisor: Prof. Dr. Martin Giese, Dr. Enrico Chiovetto

Matthias Uhl

Ein Ansatz zur computerspielbasierten neurologischen Rehabilitation von Armbewegung und Griffkraftkontrolle

Supervisor: Dr. Winfried Ilg

Bachelor Theses

(Completed in 2015)

Adrian Bauer

Entwicklung eines Kinect-basierten Computerspiels zum neurorehabilitativen Training der Beinkoordination

Supervisor: Dr. Winfried Ilg

Daniel Beck

Entwicklung eines Kinect-basierten Computerspiels zum neurorehabilitativen Training der Hand-Auge-Koordination

Supervisor: Dr. Winfried Ilg

Jan-Marco Moritz

Entwicklung eines Kinect-basierten Computerspiels zum neurorehabilitativen Training der Ganzkörperkoordination

Supervisor: Dr. Winfried Ilg

Guest Researchers

Simone Catagno, UK

Host: Dr. Enrico Chiovetto, Prof. Dr. Martin Giese

Prof. Dr. Adrien Pajon, Prof. Dr. Colleen Monaghan, France

Host: Dr. Enrico Chiovetto, Prof. Dr. Martin Giese



Department of Cellular Neurology



Clinical and Scientific Staff

HEAD OF THE DEPARTMENT

Prof. Dr. Mathias Jucker

GROUP LEADERS

Dr. Frank Baumann

Prof. Dr. Christoph Laske (Section of Dementia Research,
jointly with the University Department of Psychiatry
and Psychotherapy)

Dr. Jonas Neher

SCIENTISTS/RESIDENTS

Mehtap Bacioglu

Karoline Degenhardt

Timo Eninger

Dr. Sarah Fritschi (until 04/2015)

Dr. Petra Füger

Lisa Häsler (since 07/2015)

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Jasmin Mahler

Dr. Sonia Mazzitelli

Dr. Jörg Odenthal

Jay Rasmussen

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Manuel Schweighauser

Dr. Angelos Skodras

Dr. Matthias Staufenbiel

Dr. Bettina Wegenast-Braun

Ann-Christin Wendeln

Renata Werner

Dr. Lan Ye

TECHNICAL STAFF/ ADMINISTRATION

Anika Bühler
 Simone Eberle
 Bernadette Graus
 Christian Krüger (until 01/2015)
 Marius Lambert
 Ulrike Obermüller
 Claudia Schäfer

MASTER STUDENTS

Autumn Otchengco (07/2015)

Clinical Studies

DIAN Dominantly Inherited Alzheimer Network: The goal of DIAN is to study brain changes and biomarker changes in people who carry an Alzheimer's disease mutation to determine how the disease process develops before any symptoms are detected.

*Investigators: Prof. Dr. Mathias Jucker,
 Prof. Dr. Christoph Laske, Oliver Preische,
 Dr. Susanne Gräber-Sultan, Elke Kuder-Buletta*

DELCODE (DZNE – Longitudinal Cognitive Impairment and Dementia Study): The aim of the study is to characterize the neuronal network mechanisms of cognitive adaption and decompensation.

*Investigators: Prof. Dr. Christoph Laske, Dr. Mirco Gindullis,
 Dr. Raphael Niebler, Theresia Trunk*

A multicenter, open-label, long-term safety extension of phase II studies ABE4869g and ABE4955g in patients with mild to moderate Alzheimer's disease

*Investigators: Prof. Dr. Christoph Laske, Dr. Niklas Köhler,
 Theresia Trunk, Dr. Stephan Müller*

LipiDiDiet Trail: Complimentary treatment of patients with mild cognitive impairment with a balanced nutrition drink (Souvenaid®). A randomized double-blind comparative study of 24 months including a 12-months extension study

*Investigators: Prof. Dr. Christoph Laske, Dr. Niklas Köhler,
 Elke Vuckovic, Theresia Trunk*

12-months double-blind randomized two-arm efficacy study of Bupropion as a treatment of apathy in patients with Alzheimer's disease

*Investigators: Prof. Dr. Christoph Laske, Dr. Niklas Köhler,
 Theresia Trunk, Dr. Stephan Müller*

A Phase 2a Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multicenter Study Investigating the Safety and Tolerability of JNJ-54861911 in Subjects in the Early (Predementia) Alzheimer's Disease Spectrum

*Investigators: Prof. Dr. Christoph Laske, Oliver Preische,
 Dr. Stephan Müller, Elke Kuder-Buletta*

A Randomized, Two-Period, Double-Blind, Placebo-Controlled and Open-Label, Multicenter Extension Study to Determine the Long-Term Safety and Tolerability of JNJ-54861911 in Subjects in the Early Alzheimer's Disease Spectrum

*Investigators: Prof. Dr. Christoph Laske, Oliver Preische,
 Dr. Stephan Müller, Elke Kuder-Buletta*

A 24-month, Multicenter, Randomized, Double-blind, Placebo-controlled, Parallel-group, Efficacy, Safety, Tolerability, Biomarker, and Pharmacokinetic Study of AZD3293 in Early Alzheimer's Disease (The AMARANTH Study)

*Investigators: Prof. Dr. Christoph Laske, Oliver Preische,
 Dr. Stephan Müller, Dr. Christian Mychajliw, Elke Vukovic,
 Theresia Trunk*

Third-Party Funding

ONGOING GRANTS

Generation of APP transgenic mice

Project leader: Prof. Dr. Mathias Jucker

Funding institution: Koesler

Research fellowship

Project leader: Lan Ye

Funding institution: China Scholarship Council

Donation for Alzheimer's biomarker research

Project leader: Prof. Dr. Mathias Jucker

Funding institution: Anonymous donor

Organotypic slice cultures (031A198A)

Project leader: Prof. Dr. Mathias Jucker

Funding institution: Federal Ministry of Education and Research (BMBF), Project Management Jülich (PTJ)

Characterization of early protopathic seeds in Alzheimer's disease

Project leader: Prof. Dr. Mathias Jucker

Funding institution: Academy of Sciences and Humanities in Hamburg

Award for medical research

Project leader: Prof. Dr. Mathias Jucker

Funding institution: MetLife Foundation USA

Donation for Alzheimer research and DIAN (Dominantly Inherited Alzheimer Network)

Project leader: Prof. Dr. Mathias Jucker

Funding institution: Anonymous donor

Intersite research grant DIAN (Tübingen site)

Project leader: Prof. Dr. Mathias Jucker

Funding institution: German Center for Neurodegenerative Diseases (DZNE)

JPND – TARGETs: Targeting the propagation of pathogenic protein assemblies in neurodegenerative disease (01ED1502)

Project leader: Prof. Dr. Mathias Jucker

Funding institution: BMBF: EU Joint Programme – Neurodegenerative Disease Research (JPND)

NEW GRANTS

The role of *medin*, the most common human amyloid, in the pathology of Alzheimer's Disease (NE 1951/2-1)

Project leader: Dr. Jonas Neher

Funding institution: Deutsche Forschungsgemeinschaft (DFG)

Effects of transient peripheral immune stimulation on AD pathology

Project leader: Dr. Jonas Neher

Funding institution: The Paul G. Allen Family Foundation

Epigenetic microglial memory of peripheral inflammation as a non-genetic modifier of neurological disease (Az. 10.15.2.038MN)

Project leader: Dr. Jonas Neher

Funding institution: Fritz Thyssen Stiftung

Awards

Prof. Dr. Mathias Jucker

Teaching Award Graduate School of Molecular and Cellular Neuroscience 2015

Dr. Jonas Neher

Teaching Award Graduate School of Molecular and Cellular Neuroscience 2015

PhD Theses

(Completed in 2015)

Sarah Fritschi

Prion-like properties of A β seeds and their utility for diagnosis and therapy of Alzheimer's disease

Supervisor: Prof. Dr. Mathias Jucker

Luís Filipe Maia

Cerebrospinal fluid biomarkers of Alzheimer's disease: Cerebral β -amyloidosis mouse models as relevant translational tools

Supervisor: Prof. Dr. Mathias Jucker

Lan Ye

β -amyloid seeds: primitive and durable pathological entities in Alzheimer's disease

Supervisor: Prof. Dr. Mathias Jucker

Diploma/Master Theses

(Completed in 2015)

Autumn Otchengco

Identifying tau fragments in Alzheimer's disease patients and in mouse models for β -amyloidosis

Supervisor: Stephan Käser

Guest Researchers

Dr. Hannah Davies

Host: Dr. Jonas Neher



Independent Research Groups

Neuroregeneration and Repair

Clinical and Scientific Staff

HEAD OF THE RESEARCH GROUP

Dr. Simone Di Giovanni

SCIENTISTS/RESIDENTS

Dr. Radhika Puttagunta
Marilia Grando Soria
Luming Zhou
Guiping Kong
Francesco De Virgiliis
Vasileios Kampanis
Franziska Hoppe

Third-Party Funding

ONGOING GRANTS

Breaking the epigenetic code: A new path to axonal regeneration following axonal injuries

Project leader: Dr. Simone Di Giovanni

Funding institution: German Research Foundation (DFG)

The role of p53 in axonal regeneration of the lesioned hypogastric nerve: A novel strategy against incontinence
(Project TP4)

Project leader: Dr. Simone Di Giovanni

Funding institution: German Research Foundation (DFG), KFO 273-DFG grant

The role of p53 and cGKI pathways in axonal regeneration following CNS injury

Project leader: Dr. Simone Di Giovanni

Funding institution: German Research Foundation (DFG)

PhD Theses

(Completed In 2015)

Marialia Grando Soria

MDM2-MDM4/P53 pathways in spinal cord injury

Supervisor: Dr. Simone Di Giovanni

Undergraduate Theses

(Completed in 2015)

Franziska Hoppe

HDAC3 Inhibition promotes Neurite Outgrowth through PCAF and HDAC3 Reciprocal Nuclear Translocation

Supervisor: Dr. Radhika Puttagunta

Physiology of Learning and Memory

Clinical and Scientific Staff

HEAD OF THE RESEARCH GROUP

Dr. Ingrid Ehrlich

SCIENTISTS/RESIDENTS

Dr. Daniel Bosch (until 5/2015)

Dr. Irene Melo

Dr. Ayla Aksoy-Aksel (from 11/2015)

TECHNICAL STAFF/ADMINISTRATION

Andrea Gall

PHD DOCTORAL STUDENTS

Douglas Asede (until 3/2015)

Stephanie Knapp

MEDICAL DOCTORAL STUDENTS

Anna Gärtner (until 3/2015)

MASTER STUDENTS

Francesco Bonfiglio (until 9/2015)

Third-Party Funding

ONGOING GRANTS

Function of axo-axonic synapses in amygdala circuits and fear learning and memory

Project leader: Dr. Ingrid Ehrlich, Dr. Hansjürgen Volkmer, Dr. Gal Richter-Levin

Funding institution: The Werner Reichardt Centre for Integrative Neuroscience (CIN), Exc 307 (Pool project)

The role of sleep in the consolidation of fear extinction memory

Project leader: Dr. Ingrid Ehrlich, Prof. Dr. Christian Büchel

Funding institution: German Research Foundation (DFG), SFB-TR 654, TP A12

NEW GRANTS

Plasticity of intercalated cell microcircuits in fear learning

Project leader: Dr. Ingrid Ehrlich

Funding institution: German Research Foundation (DFG), EH197/3-1

PHD Theses

(Completed in 2015)

Douglas Asede

Characterization of microcircuits of fear: Novel function of medial paracapsular intercalated cells in the mouse amygdala

Supervisor: Dr. Ingrid Ehrlich

Diploma/Master Theses

(Completed in 2015)

Francesco Bonfiglio

Electrophysiological study of spike-timing dependent plasticity at thalamic afferents to principal neurons of the lateral amygdala in vitro: Preliminary results and suggestions for optimization of protocols.

Supervisor: Dr. Ingrid Ehrlich; Dr. Renato Corradetti (Universita di Firenze)



Publications and Student Training in 2015

List of Publications in 2015

(In alphabetical order)

Peer Reviewed Articles

- Abbasi A, Forsberg K, Bischof F** (2015) The role of the ubiquitin-editing enzyme A20 in diseases of the central nervous system and other pathological processes. *Front Mol Neurosci* 8: 21
- Abrams AJ, Hufnagel RB, Rebelo A, Zanna C, Patel N, Gonzalez MA, Campeanu IJ, Griffin LB, Groenewald S, Strickland AV, Tao F, Speziani F, Abreu L, **Schüle R**, Caporali L, La Morgia C, Maresca A, Liguori R, Lodi R, Ahmed ZM, Sund KL, Wang X, Krueger LA, Peng Y, Prada CE, Prows CA, Schorry EK, Antonellis A, Zimmerman HH, Abdul-Rahman OA, Yang Y, Downes SM, Prince J, Fontanesi F, Barrientos A, Németh AH, Carelli V, Huang T, Zuchner S, Dallman JE. Mutations in SLC25A46, encoding a UGO1-like protein, cause an optic atrophy spectrum disorder. *Nat Genet* 2015; 47(8): 926-32
- Arnstein D, **Dicke PW**, Junker MA, Smilgin A, **Thier P**. Microsaccade control signals in the cerebellum. *Journal of Neuroscience* 2015; 35(8): 3403-11. doi: 10.1523/JNEUROSCI.2458-14.2015
- Asede D, Bosch D**, Lüthi A, Ferraguti F, **Ehrlich I** (2015) Sensory inputs to intercalated cells provide fear-learning modulated inhibition to the basolateral amygdala. *Neuron* 86(2): 541-554
- Atabaki A, Marciniak K, **Dicke PW**, **Thier P**. Assessing the precision of gaze following using a stereoscopic 3D virtual reality setting. *Vision Research* 2015; 112: 68-82
- Baier B, Müller-Forell W, Müller N, Dieterich M, **Karnath H-O**. Anosognosia for obvious visual field defects in stroke patients. *Brain Structure & Function* 2015; 220: 1855-60
- Balakrishnan K, Rijal Upadhaya A, Steinmetz J, Reichwald J, Abramowski D, Fändrich M, Kumar S, Yamaguchi H, Walter J, **Staufenbiel M**, Thal DR (2015) Impact of amyloid β aggregate maturation on antibody treatment in APP23 mice. *Acta neuropathologica communications* 3: 07
- Bauer R, Fels M, Vukelic M, **Ziemann U**, Gharabaghi A (2015) Bridging the gap between motor imagery and motor execution with a brain-robot interface. *Neuroimage* 108: 319-327
- Becker F, Schubert J**, Weckhuysen S, Suls A, Grüninger S, Korn-Merker E, Hofmann-Peters A, Sperner J, Cross H, Hallmann K, Elger CE, Kunz WS, Madeleyen R, **Lerche H**, **Weber YG**. Do Glut1 (glucose transporter type 1) defects exist in epilepsy patients responding to a ketogenic diet? *Epilepsy Res.* 2015 Aug; 114: 47-51
- Berg D**, Postuma RB, Adler CH, Bloem BR, Chan P, Dubois B, **Gasser T**, Goetz CG, Halliday G, Joseph L, Lang AE, **Liepert-Scarfone I**, Litvan I, Marek K, Obeso J, Oertel W, Olanow CW, Poewe W, Stern M, Deuschl G. MDS research criteria for prodromal Parkinson's disease. *Mov Disord* 2015; 30(12): 1600-11
- Bischof F**, Weber YG (2015) [Fampridin: Gute Krankengymnastik reicht aus - Kontra]. *Allgemeine Neurologie* 42: 544-545
- Böhm M, Mahfoud F, Ukena C, Hoppe UC, Narkiewicz K, Negoita M, Ruilope L, Schlaich MP, Schmieder RE, Whitbourn R, Williams B, Zeymer U, Zirlik A, Mancia G; GSR Investigators (**Zürrn, CS**) (2015). First report of the Global SYMPPLICITY Registry on the effect of renal artery denervation in patients with uncontrolled hypertension. *Hypertension.* 65(4): 766-74
- Bonilha L, Gleichgerrcht E, Fridriksson J, Rorden C, Breedlove JL, Nesland T, Paulus W, Helms G, **Focke NK**. Reproducibility of the Structural Brain Connectome Derived from Diffusion Tensor Imaging. *PLoS One.* 2015 Sep 2; 10(8): e0135247
- Boon P, Vonck K, van Rijckevorsel K, Tahry RE, Elger CE, Mullatti N, Schulze-Bonhage A, Wagner L, Diehl B, Hamer H, Reuber M, Kostov H, Legros B, Noachtar S, **Weber YG**, Coenen VA, Rooijackers H, Schijns OE, Selway R, Van Roost D, Eggleston KS, Van Grunderbeek W, Jayewardene AK, McGuire RM. A prospective, multicenter study of cardiac-based seizure detection to activate vagus nerve stimulation. *Seizure.* 2015 Nov; 32:52-61
- Bosch D, Ehrlich I** (2015) Postnatal maturation of GABAergic modulation of sensory inputs onto lateral amygdala principal neurons. *Journal of Physiology* 593(19): 4387-409
- Brelstaff J, Ossola B, **Neher JJ**, Klingstedt T, Nilsson KP, Goedert M, Spillantini MG, Tolkovsky AM (2015) The fluorescent pentameric oligothiophene pFTAA identifies filamentous tau in live neurons cultured from adult P301S tau mice. *Frontiers in Neuroscience* 29:184

- Brendel B, **Synofzik M**, Ackermann H, Lindig T, Schölderle T, **Schöls L**, Ziegler W. Comparing speech characteristics in spinocerebellar ataxias type 3 and type 6 with Friedreich ataxia. *J Neurol* 2015; 262(1): 21-6
- Brennenstuhl H, Armento A**, Braczynski AK, Mittelbronn M, **Naumann U** (2015) IkappaBzeta, an atypical member of the inhibitor of nuclear factor kappa B family, is induced by gamma-irradiation in glioma cells, regulating cytokine secretion and associated with poor prognosis. *Int J Oncol* 47:1971-1980
- Brenner S, Wersinger C, **Gasser T**. Transcriptional regulation of the α -synuclein gene in human brain tissue. *Neurosci Lett* 2015; 599: 140-5
- Brockmann K, Schulte C, Deuschle C, Hauser AK**, Heger T, **Gasser T, Maetzler W, Berg D**. Neurodegenerative CSF markers in genetic and sporadic PD: Classification and prediction in a longitudinal study. *Parkinsonism Relat Disord* 2015; 21(12): 1427-34
- Brockmann K, Srulijes K**, Pflederer S, **Hauser AK, Schulte C, Maetzler W, Gasser T, Berg D**. GBA-associated Parkinson's disease: reduced survival and more rapid progression in a prospective longitudinal study. *Mov Disord* 2015; 30(3): 407-11
- Brüggemann N, Kühn A, Schneider SA, Kamm C, Wolters A, Krause P, Moro E, Steigerwald F, Wittstock M, Tronnier V, Lozano AM, Hamani C, Poon YY, Zittel S, Wächter T, Deuschl G, **Krüger R**, Kupsch A, Münchau A, Lohmann K, Volkmann J, Klein C. Short- and long-term outcome of chronic pallidal neurostimulation in monogenic isolated dystonia. *Neurology* 2015; 84(9): 895-903
- Busche MA, Grienberger C, Keskin AD, Song B, Neumann U, **Staufenbiel M**, Förstl H, Konnerth A (2015) Decreased amyloid- β and increased neuronal hyperactivity by immunotherapy in Alzheimer's models. *Nature neuroscience* 18:1725-7
- Caggiano V, **Giese M, Thier P**, Casile A. Encoding of point of view during action observation in the Local Field Potentials of macaque area F5. *European Journal of Neuroscience* 2015; 41(4): 466-76.
- Casadei N, Sood P, Ulrich T, Kieper N, Helling S, May C, Glaab E, Chen J, Nuber S, Marcus K, Rapaport D, Ott T, Riess O, **Krueger R, Fitzgerald JC**. Mitochondrial defects and neurodegeneration in mice overexpressing wild-type or G399S mutant HtrA2. *Hum Mol Genet* 2015, 41:466-76
- Chakrabarti S, Schwarz S.**; Whisking control by motor cortex. *Scholarpedia* 2015; 10(3): 7466
- Chen C-Y, Ignashchenkova A, **Thier P**, Hafed Z. Neuronal response gain enhancement prior to microsaccades. *Current Biology* 2015; 25(16): 2065-74
- Chen J, Shinde S, Koch MH, Eisenacher M, Galozzi S, Lerari T, Barkovits K, Subedi P, **Krüger R**, Kuhlmann K, Sellergren B, Helling S, Marcus K. Low-bias phosphopeptide enrichment from scarce samples using plastic antibodies. *Sci Rep* 2015; 5: 11438
- Coffee and Caffeine Genetics Consortium , Cornelis MC, Byrne EM, Esko T, Nalls MA, Ganna A, Paynter N, Monda KL, Amin N, Fischer K, Renstrom F, Ngwa JS, Huikari V, Cavadino A, Nolte IM, Teumer A, Yu K, Marques-Vidal P, Rawal R, Manichaikul A, Wojczynski MK, Vink JM, Zhao JH, Burlutsky G, Lahti J, Mikkilä V, Lemaitre RN, Eriksson J, Musani SK, Tanaka T, Geller F, Luan J, Hui J, Mägi R, Dimitriou M, Garcia ME, Ho WK, Wright MJ, Rose LM, Magnusson PK, Pedersen NL, Couper D, Oostra BA, Hofman A, Ikram MA, Tiemeier HW, Uitterlinden AG, van Rooij FJ, Barroso I, Johansson I, Xue L, Kaakinen M, Milani L, Power C, Snieder H, Stolk RP, Baumeister SE, Biffar R, Gu F, Bastardot F, Kutalik Z, Jacobs DR, Forouhi NG, Mihailov E, Lind L, Lindgren C, Michaëlsson K, Morris A, Jensen M, Khaw KT, Luben RN, Wang JJ, Männistö S, Perälä MM, Kähönen M, Lehtimäki T, Viikari J, Mozaffarian D, Mukamal K, Psaty BM, Döring A, Heath AC, Montgomery GW, Dahmen N, Carithers T, Tucker KL, Ferrucci L, Boyd HA, Melbye M, Treur JL, Mellström D, Hottenga JJ, Prokopenko I, Tönjes A, Deloukas P, Kanoni S, Lorentzon M, Houston DK, Liu Y, Danesh J, Rasheed A, Mason MA, Zonderman AB, Franke L, Kristal BS, **International Parkinson's Disease Genomics Consortium** (IPDGC) , North American Brain Expression Consortium (NABEC) , UK Brain Expression Consortium (UKBEC) , Karjalainen J, Reed DR, Westra HJ, Evans MK, Saleheen D, Harris TB, Dedoussis G, Curhan G, Stumvoll M, Beilby J, Pasquale LR, Feenstra B, Bandinelli S, Ordovas JM, Chan AT, Peters U, Ohlsson C, Gieger C, Martin NG, Waldenberger M, Siscovick DS, Raitakari O, Eriksson JG, Mitchell P, Hunter DJ, Kraft P, Rimm EB, Boomsma

- DI, Borecki IB, Loos RJ, Wareham NJ, Vollenweider P, Caporaso N, Grabe HJ, Neuhaus ML, Wolffenbuttel BH, Hu FB, Hyppönen E, Järvelin MR, Cupples LA, Franks PW, Ridker PM, van Duijn CM, Heiss G, Metspalu A, North KE, Ingelsson E, Nettleton JA, van Dam RM, Chasman DI, Nalls MA, Plagnol V, Hernandez DG, **Sharma M**, Sheerin UM, Saad M, **Simón-Sánchez J**, **Schulte C**, Lesage S, Sveinbjörnsdóttir S, Arepalli S, Barker R, Ben-Shlomo Y, Berendse HW, **Berg D**, Bhatia K, de Bie RM, Biffi A, Bloem B, Bochdanovits Z, Bonin M, Bras M, **Brockmann K**, Brooks J, Burn DJ, Charlesworth G, Chen H, Chinnery PF, Chong S, Clarke CE, Cookson MR, Cooper JM, Corvol JC, Counsell C, Damier P, Dartigues JF, Deloukas P, Deuschl G, Dexter DT, van Dijk KD, Dillman A, Durif F, Dürr A, Edkins S, Evans JR, Foltynie T, Dong J, Gardner M, Gibbs JR, Goate A, Gray E, Guerreiro R, Harris C, van Hilten JJ, Hofman A, Hollenbeck A, Holton J, Hu M, Huang X, Hershey MS, **Wurster I**, Mätzler W, Hudson G, Hunt SE, Huttenlocher J, Illig T, München HZ, Jónsson PV, Lambert JC, Langford C, Lees A, Lichtner P, München HZ, Limousin P, Lopez G, Lorenz D, McNeill A, Moorby C, Moore M, Morris HR, Morrison KE, O' Sullivan SS, Pearson J, Perlmutter JS, Pétursson H, Pollak P, Potter S, Ravina B, Revesz T, Riess O, Rivadeneira F, Rizzu P, Ryten M, Sawcer S, Schapira A, Scheffer H, Shaw K, Sidransky E, Smith C, Spencer CC, Stefánsson H, Bettella F, Stockton JD, Strange A, Talbot K, Tanner M, Tashakkori-Ghanbaria A, Tison F, Trabzuni D, Traynor BJ, Uitterlinden AG, Velseboer D, Vidailhet M, Walker R, van de Warrenburg B, Wickremaratchi M, Williams N, Williams-Gray CH, Winder-Rhodes S, Stefánsson K, Martinez M, Sabatier P, Wood NW, Hardy J, Heutink P, Brice A, **Gasser T**, Singleton AB, Singleton A, Cookson M, Gibbs J, Hernandez D, Dillman A, Nalls M, Zonderman A, Arepalli S, Ferrucci L, Johnson R, Longo D, O'Brien R, Traynor B, Troncoso J, van der Brug M, Zielke R, Hardy J, Weale M, Ryten M, Ramasamy A, Trabzuni D, Box PO, Smith C, Walker R. Genome-wide meta-analysis identifies six novel loci associated with habitual coffee consumption. *Mol Psychiatry* 2015; 20(5): 647-56
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List of Student Training in 2015

(In alphabetical order)

Lectures

(Summer Term/Winter Term)

Basic Neurobiology

Prof. Dr. Philipp Kahle (coordinator), Dr. Ingrid Ehrlich

Curriculum Molecular Medicine

Behavior and Cognition: Neuropsychology

Prof. Dr. Dr. Hans-Otto Karnath, Dr. Marc Himmelbach

Graduate Training Centre of Neuroscience

Biochemistry II

Prof. Dr. Philipp Kahle

Faculty of Science

Cell Imaging Techniques

Dr. Angelos Skodras et al.

Graduate Training Centre of Neuroscience

Cellular and Molecular Neuroscience

Dr. Frank Baumann et al.

Graduate Training Centre of Neuroscience

Diagnosis of Brain Death

Dr. Sven Poli

Medical Faculty

Dynamics of Neural Systems

Prof. Dr. Martin Giese

Graduate Training Centre of Neuroscience

Functional Neuroanatomy

PD Dr. Fahad Sultan

Graduate Training Centre of Neuroscience

Fundamentals of Sensorimotor Integration

Prof. Dr. Uwe Ilg

Graduate Training Centre of Neuroscience

Genetic and Molecular Basis of Neural Diseases I

Prof. Dr. Thomas Gasser, Prof. Dr. Mathias Jucker,

Prof. Dr. Ludger Schöls, Dr. Frank Baumann

Graduate Training Centre of Neuroscience

Genetic and Molecular Basis of Neural Diseases II

Prof. Dr. Holger Lerche, Prof. Dr. Ulrike Naumann,

PD Dr. Felix Bischof, Dr. Snezana Maljevic

Graduate Training Centre of Neuroscience

Introduction to Clinical Neurology

Prof. Dr. Daniela Berg, PD Dr. Felix Bischof,

PD Dr. Jennifer Diedler, Dr. Markus Krumbholz (exams)

Medical Faculty

Lecture General Neurology

Prof. Dr. Thomas Gasser, Prof. Dr. Holger Lerche,

Prof. Dr. Ulf Ziemann, Prof. Dr. Hans-Otto Karnath

Medical Faculty

Lecture series for doctoral candidates: Ion Channels and Epilepsy

Prof. Dr. Holger Lerche

Graduate Training Centre of Neuroscience

Lecture series on the fundamentals of neurobiology – Part I + II

Dr. Snezana Maljevic

Graduate Training Centre of Neuroscience

Machine Learning II

Prof. Dr. Martin Giese, Dr. Dominik Endres

Graduate Training Centre of Neuroscience

Methods in Neuropsychology

Dr. Marc Himmelbach, Dr. Bianca de Haan

Graduate Training Centre of Neuroscience

Module Neurobiology

Prof. Dr. Thomas Gasser, Prof. Dr. Holger Lerche,

Prof. Dr. Arthur Melms, Prof. Dr. Ulrike Naumann,

Prof. Dr. Bernd Wissinger, Dr. Frank Baumann,

Dr. Snezana Maljevic, Dr. Jonas Neher

Curriculum Molecular Medicine

Molecular and Cellular Basis of Learning and Memory*Dr. Ingrid Ehrlich (coordinator)*

Graduate Training Centre of Neuroscience

Motor Systems*Prof. Dr. Hans-Peter Thier*

Graduate Training Centre of Neuroscience

Motor Systems NIPS*Dr. Winfried Ilg, Prof. Dr. Cornelius Schwarz*

Graduate Training Centre of Neuroscience

Neural Motor Control*Dr. Winfried Ilg*

Graduate Training Centre of Neuroscience

Neurobiochemistry*Prof. Dr. Philipp Kahle (coordinator)*

Molecular Medicine, Basic Neurobiology

Neurochemistry and Neurotransmitters*Prof. Dr. Philipp Kahle*

Graduate Training Centre of Neuroscience

Neurocritical Care*Dr. Florian Müller-Dahlhaus*

Winter School Critical Care (Society of Neurocritical Care Medicine)

Neurogenetic Research*Prof. Dr. Ludger Schöls*

Medical Faculty

Neurogeriatrics (QB7)*Prof. Dr. Walter Maetzler*

Medical Faculty

Neuroglia*Dr. Jonas Neher & Dr. Maria Kukley*

Graduate Training Centre of Neuroscience

Neurological Emergencies*Dr. Sven Poli*

Medical Faculty

Neurophysiology*Prof. Dr. Cornelius Schwarz, Dr. Christine Pedroarena*

Graduate Training Centre of Neuroscience

Parkinson's for Pharmacists*Prof. Dr. Ludger Schöls*

Faculty of Science

Perception, Cognition & Behavior*Dr. Marc Himmelbach*

Graduate Training Centre of Neuroscience

Primary Headache Syndromes and Neuropathic Pain*PD Dr. Tobias Freilinger*

Medical Faculty

Zellbiologie Neurologischer Erkrankungen*Dr. Frank Baumann*

Faculty of Science (Biology)

Seminars and Courses

(Summer Term/Winter Term)

Addressing Current Questions in Research on Sensorimotor Coordination

Prof. Dr. Hans-Peter Thier
Medical Faculty

Animal Physiology Practical for Students of Bioinformatics (BSc)

Prof. Dr. Uwe Ilg
Faculty of Science (Biology)

Articulation and the Brain – Neurophonetics, an Emerging Scientific Discipline

PD Dr. Ingo Hertrich
General Linguistics (Philosophical Faculty) and Cognitive Science (Faculty of Science)

Basics in Gene Therapy

Prof. Dr. Ulrike Naumann
Medical Faculty

Bedside Teaching: Neurological Examination for Advanced Students

Prof. Dr. Ludger Schöls, Prof. Dr. Walther Maetzler, Prof. Dr. Rejko Krüger, Prof. Dr. Thomas Gasser
Medical Faculty

Bedside Training: Neurological Diagnostics

Prof. Dr. Yvonne Weber
Medical Faculty

Bedside Training: Neurology and Epileptology

Prof. Dr. Yvonne Weber
Medical Faculty

Chronic Pain Syndromes – Bedside Teaching (QB14)

PD Dr. Tobias Freilinger
Medical Faculty

CIN/HH Electrophysiology Journal Club

Dr. Ingrid Ehrlich, Dr. Snezana Maljevic
Medical Faculty

Current Problems in Neuropsychology

Prof. Dr. Dr. Hans-Otto Karnath
Medical Faculty

Determination of the Paracrine Effects of CPE on GBM Cell Migration and Proliferation Using Live Cell Imaging

Prof. Dr. Ulrike Naumann
HH Lunch Seminar, Medical Faculty

Dynamics of Neural Systems (exercises)

Prof. Dr. Martin Giese, Tobias Beck
Graduate Training Centre of Neuroscience

Expression and Involvement of Ikbz in Cell Death in GBM Cell Lines

Prof. Dr. Ulrike Naumann
HH Lunch Seminar, Medical Faculty

Geriatric-neurological-psychiatric Case Conference

Prof. Dr. Gerhard W. Eschweiler (UKT), Prof. Dr. Walter Maetzler, Dr. Günther Schnauder (UKT)
Medical Faculty

Hertie Lunch Seminar

Prof. Dr. Uwe Ilg
Medical Faculty

INNOVATE: Interdisciplinary Neuro-Oncology from Molecular Mechanisms to Patient Stratification and Therapy

Prof. Dr. med. Dr. rer. nat. Ghazaleh Tabatabai
Medical Faculty, Graduate Training Centre of Neuroscience

IPSC Journal Club

Dr. Snezana Maljevic
Medical Faculty

Machine Learning II (exercises)

Prof. Dr. Martin Giese, Dr. Enrico Chiovetto
Graduate Training Centre of Neuroscience

Matters of Taste. The Neuroscience and Philosophy of Taste

PD Dr. Axel Lindner
Interfaculty (Medical Faculty / Humanities)

Mentoring Lernportfolio Humanmedizin*Dr. Marc Himmelbach*

Medical Faculty

Methodological Frontiers in Cognitive Neuroscience*Dr. Marc Himmelbach*

Graduate Training Centre of Neuroscience

Molecular Neurooncology*Prof. Dr. Ulrike Naumann*

Medical Faculty

Motor Course*Prof. Dr. Cornelius Schwarz*

Graduate Training Centre of Neuroscience

Neural Prosthetics*PD Dr. Axel Lindner*

Graduate Training Centre of Neuroscience

Neurobiological Monday Seminar*Prof. Dr. Uwe Ilg*

Medical Faculty

Neurocolloquium*Prof. Dr. Hans-Peter Thier*

Graduate Training Centre of Neuroscience / Medical Faculty

Neurological Differential Diagnosis and Interactive Clinical Case Discussions*PD Dr. Tobias Freilinger*

Medical Faculty

Neurological Examination Course*Prof. Dr. Thomas Gasser, Prof. Dr. Holger Lerche,**Prof. Dr. Ulf Ziemann*

Medical Faculty

Neurological Palliative Care*Dr. Matthias Synofzik*

Medical Faculty

Neurological Seminar*Prof. Dr. Daniela Berg, Prof. Dr. Rejko Krüger,**Prof. Dr. Walter Maetzler and senior physicians from other departments*

Medical Faculty

Neurology Seminar and Bedside Teaching*Prof. Dr. Daniela Berg, PD Dr. Felix Bischof, PD Dr. Niels Focke,**PD Dr. Tobias Freilinger, Dr. Florian Müller-Dahlhaus, Dr.**Markus Krumbholz, Dr. Sven Poli*

Medical Faculty

Neuropathological Case Meeting*Prof. Dr. Manuela Neumann (Dept. of Neuropathology, UKT)*

Medical Faculty

Neurophysiology Seminars*Dr. Ingrid Ehrlich (coordinator: Prof. Dr. Olga Garaschuk)*

Medical Faculty

Oncolytic Viruses as Cancer Therapeutic Drugs*Prof. Dr. Ulrike Naumann*

Medical Faculty

Scientific Colloquium Neurology (“Wednesday Colloquium”)*Prof. Dr. Rejko Krüger, Prof. Dr. Walter Maetzler*

Medical Faculty

Speech and Emotion – Meaning and Prosody*PD Dr. Ingo Hertrich*

General Linguistics (Philosophical Faculty)

and Cognitive Science (Faculty of Science)

Technical Didactics: Neuroscience in the Classroom*Prof. Dr. Uwe Ilg*

Faculty of Science (Biology)

The Neurobiology of the Cerebellum*Prof. Dr. Hans-Peter Thier*

Medical Faculty

Therapy Seminar of the Neurological Clinic*Prof. Dr. Holger Lerche, Prof. Dr. Ulf Ziemann,**Prof. Dr. Thomas Gasser, Prof. Dr. Rejko Krüger,**Prof. Dr. Hans-Peter Thier*

Medical Faculty

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