

# Annual Report 2016







CENTER OF NEUROLOGY TÜBINGEN

# Annual Report 2016

## DIRECTORS

Prof. Dr. Thomas Gasser  
Prof. Dr. Mathias Jucker  
Prof. Dr. Holger Lerche  
Prof. Dr. Peter Thier  
Prof. Dr. Ulf Ziemann

EBERHARD KARLS  
UNIVERSITÄT  
TÜBINGEN



Hertie-Institut  
für klinische Hirnforschung

UNIVERSITÄTS  
KLINIKUM  
TÜBINGEN



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## The Center of Neurology in 2016

**The Center for Neurology at the University of Tübingen was founded in 2001. It unites the Hertie Institute for Clinical Brain Research (HIH) and the University Hospital's Clinical Neurology Department. In research, teaching and patient care the center is dedicated to excellence in the study of the human brain and its disorders.**

The Center for Neurology presently consists of five departments, focussing on important areas of basic and clinical brain research and patient care, including Stroke, Epilepsy, Neurooncology, Neurodegenerative and Neurocognitive Disorders. All departments provide patient care within the University Hospital, while the clinical and basic research groups are part of the Hertie Institute.

The fact that all departments of the center actively participate, albeit to a different degree, in the clinical care of patients with neurologic diseases is central to the concept of successful clinical brain research at the Hertie Institute.

This applies most obviously to clinical trials, which are conducted, for example, in the treatment of Parkinson's disease, multiple sclerosis, epilepsy and brain tumors. However, the intimate interconnection of science and patient care is of eminent importance to all areas of disease-related neuroscientific research. It forms the very center of the Hertie concept and distinguishes the Center for Neurology from other neuroscience institutions. In particular, the close interaction between basic science and patient care at the HIH and the University Hospital's Clinical Neurology Department was seen as a role model for clinical and translational research in Germany by the German Council of Science and Humanities (Wissenschaftsrat).

*Mit dem im Jahre 2001 unterzeichneten Vertrag zwischen der Gemeinnützigen Hertie-Stiftung (GHS) und dem Land Baden-Württemberg, der Universität Tübingen und ihrer medizinischen Fakultät sowie dem Universitätsklinikum Tübingen wurde das „Zentrum für Neurologie“ geschaffen. Damit entstand eines der größten Zentren für klinische und krankheitsorientierte Hirnforschung in Deutschland.*

*Der Wissenschaftsrat hat das Zentrum als modellhaft für die Universitätsmedizin in Deutschland gewürdigt, insbesondere die praktizierte Verbindung von Grundlagenforschung und klinischer Praxis.*

*Das Zentrum besteht aus zwei eng verbundenen Institutionen, der Neurologischen Klinik und dem Hertie-Institut für klinische Hirnforschung (HIH). Die Aufgaben des Zentrums liegen sowohl in der Krankenversorgung durch die Neurologische Klinik als auch in der wissenschaftlichen Arbeit der im HIH zusammengeschlossenen Forscher. Die besonders enge Verknüpfung von Klinik und Grundlagenforschung innerhalb jeder einzelnen Abteilung und die Department-Struktur sind fundamentale Aspekte des Hertie-Konzeptes und ein Alleinstellungsmerkmal gegenüber anderen Institutionen der Hirnforschung in Deutschland. In der Department-Struktur sind die Professoren mit Leitungsfunktion akademisch und korporationsrechtlich gleichgestellt.*

*Das Zentrum besteht derzeit aus fünf Abteilungen: Der Abteilung Neurologie mit Schwerpunkt neurovaskuläre Erkrankungen (Prof. Dr. med. Ulf Ziemann), der Abteilung Neurologie mit Schwerpunkt neurodegenerative Erkrankungen (Prof. Dr. med. Thomas Gasser), der Abteilung Neurologie mit Schwerpunkt Epileptologie (Prof. Dr. med. Holger Lerche), der Abteilung Kognitive Neurologie (Prof. Dr. med. Hans-Peter Thier) und der Abteilung für Zellbiologie Neurologischer Erkrankungen (Prof. Dr. sc. nat. Mathias Jucker). Die ersten drei Genannten sind bettenführende Abteilungen in der Neurologischen Klinik, die beiden Letztgenannten sind an der Patientenversorgung im Rahmen von Spezialambulanzen beteiligt. Die klinischen Abteilungen sind für die Versorgung von Patienten mit der gesamten Breite neurologischer Erkrankungen gemeinsam verantwortlich. Die Einheit der Neurologischen Klinik in Lehre, Ausbildung und Krankenversorgung wird dabei durch eine gemeinsame Infrastruktur (Patientenaufnahme, Behandlungspfade, Poliklinik, diagnostische Labors, Bettenmanagement, Pflegedienst) gesichert. Die Neurologische Klinik besteht daher nach innen und außen weiterhin als einheitliche Struktur. In den klinischen Abteilungen werden pro Jahr mehr als 5.000 Patienten stationär und rund 14.000 Patienten ambulant behandelt.*

# Facts & Figures

## CENTER OF NEUROLOGY



**Hertie-Institut**  
für klinische Hirnforschung



UNIVERSITÄTS  
**KLINIKUM**  
TÜBINGEN

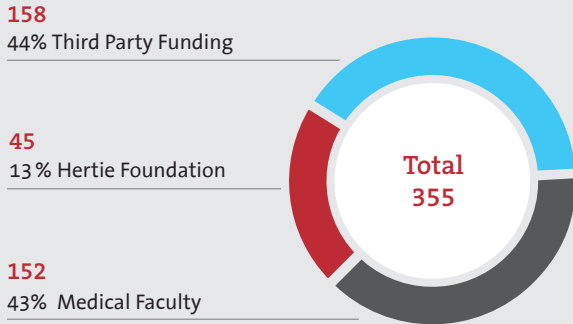
Forschung		Klinik	
Gemeinsame Poolmittel	Schlaganfall, Neuroprotektion & Plastizität, Experimentelle Neuroonkologie, Neuroimmunologie	<b>Abt. Neurologie mit Schwerpunkt neurovaskuläre Erkrankungen</b> <i>Prof. Dr. Ulf Ziemann</i>	<b>Stationär:</b> Stroke Unit und Allgemein-Neurologie <b>Spezialambulanzen</b>
	Parkinson, seltene neuro- degenerative Erkrankungen, Genetik, Biomarker	<b>Abt. Neurologie mit Schwerpunkt neurodegenerative Erkrankungen</b> <i>Prof. Dr. Thomas Gasser</i>	<b>Stationär:</b> Neurodegenerative Erkrän- kungen und Allgemein-Neurologie <b>Spezialambulanzen</b>
	Epilepsie, Migräne: Genetik, Mechanismen, Therapie, Bildgebung	<b>Abt. Neurologie mit Schwerpunkt Epileptologie</b> <i>Prof. Dr. Holger Lerche</i>	<b>Stationär:</b> Epilepsien & prächirurgi- sche Epilepsie-Diagnostik und Allgemein-Neurologie <b>Spezialambulanzen</b>
	Wahrnehmung und Handlungs- kontrolle, soziale und exekutive Funktionen und ihre Störungen	<b>Abt. Kognitive Neurologie</b> <i>Prof. Dr. Hans-Peter Thier</i>	<b>Spezialambulanzen</b>
	Alzheimer, Amyloid Angiopathie, Hirnalterung	<b>Abt. Zellbiologie neurologischer Erkrankungen</b> <i>Prof. Dr. Mathias Jucker</i>	<b>Spezialambulanzen</b>
	Neuroregeneration, Lernen und Gedächtnis	<b>Unabhängige Nachwuchsgruppen</b>	
<b>Gemeinsame Infrastruktur</b>			

Gemeinsame Poliklinik



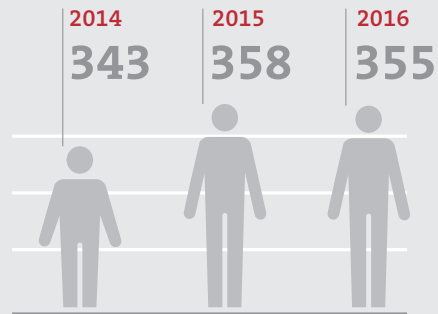
**NUMBER OF STAFF IN 2016**

Center of Neurology without nursing services (by headcount)



**DEVELOPMENT OF STAFF**

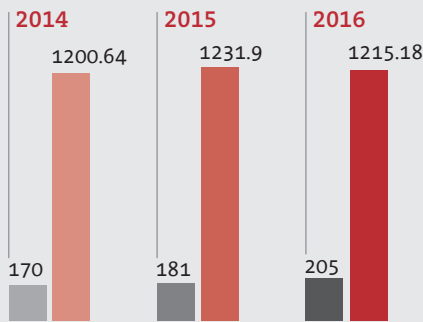
Center of Neurology (by headcount)



**NUMBER OF PUBLICATIONS**

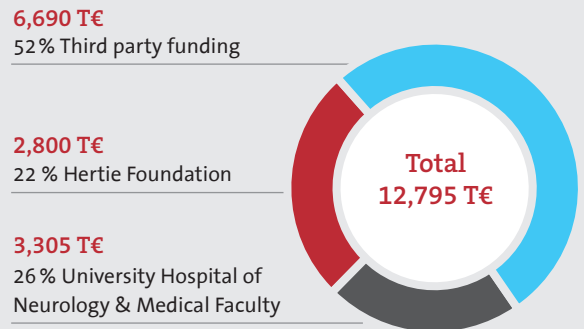
**IMPACT FACTORS**

Center of Neurology (SCIE and SSCI / in 100 %)



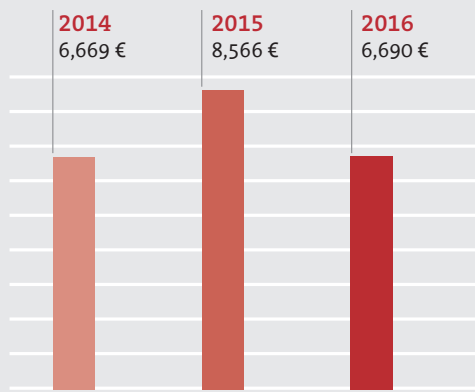
**TOTAL FUNDINGS IN 2016**

Center of Neurology



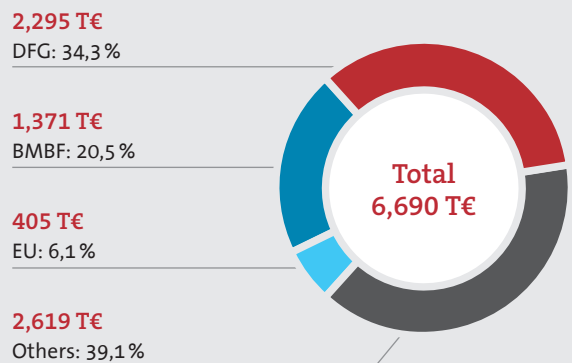
**THIRD PARTY FUNDING**

Center of Neurology (T€)



**THIRD PARTY FUNDING IN 2016**

Center of Neurology





## University Hospital of Neurology

### CLINICAL CARE

The University Hospital's Clinic of Neurology treats inpatients with the complete spectrum of neurologic diseases on three general wards. Patients with acute strokes are treated on a specialized certified stroke-unit which allows 24-hour surveillance and treatment. Neurointensive-care patients are treated in a cooperative model on the intensive care unit of the Clinic of Neurosurgery. A specialized EEG-monitoring unit allows continuous long-term EEG recordings for patients with intractable epilepsies.

In the outpatient unit of the clinic around 14,000 (including diagnostic procedures) patients are examined and treated every year, many of them in speciality clinics which are directed by recognized specialists in their respective fields.

### PATIENTENVERSORGUNG

*Die Neurologische Klinik am Universitätsklinikum Tübingen behandelt Patienten mit dem gesamten Spektrum neurologischer Erkrankungen auf drei Allgemeinstationen. Patienten mit akuten Schlaganfällen werden auf einer zertifizierten Schlaganfall-Spezialstation („Stroke-Unit“) behandelt, die rund um die Uhr die erforderlichen Überwachungs- und Therapiemaßnahmen erlaubt. Neurointensiv-Patienten werden in einem kooperativen Modell hauptsächlich auf der neurochirurgischen Intensivstation behandelt. Daneben gibt es eine spezielle Einheit zur kontinuierlichen Langzeit-EEG-Ableitung (EEG-Monitoring) für Patienten mit schwer behandelbaren Epilepsien.*

*In der neurologischen Poliklinik werden jährlich rund 14.000 Patienten (inkl. diagnostischer Prozeduren) pro Jahr ambulant betreut, viele davon in Spezialambulanzen, die von ausgewiesenen Experten für die jeweiligen Erkrankungen geleitet werden.*

## Clinical Performance Data

Close monitoring of patients at the intensive care unit.



### INPATIENT CARE

The inpatient units of the University Hospital of Neurology treated more than 5,260 patients in 2016.

#### NUMBER OF ADMISSIONS

5,260

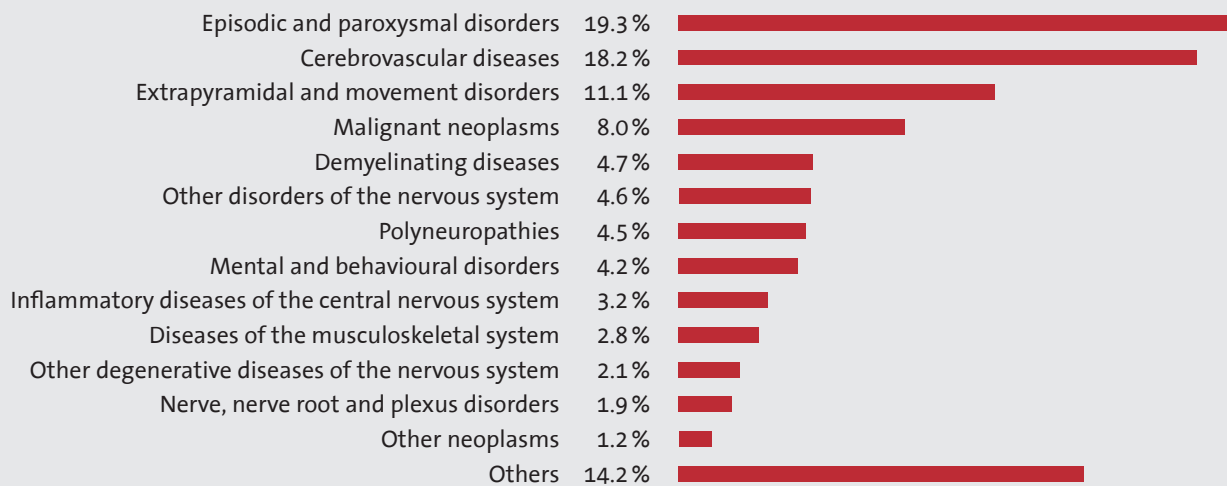
#### LENGTH OF STAY (IN DAYS)

4.9

#### CASE-MIX-INDEX

1.48

#### INPATIENT DIAGNOSIS GROUPS



### OUTPATIENT CARE

#### NUMBER OF CONSULTATIONS

(including diagnostic procedures)

13,975



## The Hertie Institute for Clinical Brain Research (HIH)



**Hertie-Institut**  
für klinische Hirnforschung

**Since its founding 15 years ago, the Hertie Institute has grown to more than 350 employees at all levels, from technicians to PhD students to full professors. The institute's achievements include discoveries related to the molecular, genetic and physiological basis of a number of major neurologic diseases.**

The institute presently consists of five departments. They combine basic and clinical research with patient care, albeit to different degrees and with variable emphasis: three departments focusing on Stroke, Neurooncology, Epileptology, and Neurodegenerative Disorders treat outpatients in specialty clinics, but also inpatients with the whole spectrum of neurological diseases, while the Departments of Cognitive Neurology and Cellular Neurology provide specialized diagnostic services and care in an outpatient setting only, focusing on neurocognitive impairments and Alzheimer's disease, respectively.

The institute is home to a total of 16 professors, 350 members and 33 research groups. 31 belong to the aforementioned departments. Two exist as independent research groups.



In 2016, scientists at the Center for Neurology obtained more than 6.6 million Euros in third party funding and published 205 papers in peer reviewed journals.

Finally, the interaction with the Tübingen site of the German Center for Neurodegenerative Diseases (DZNE) was strengthened since all activities of the DZNE take place in the new building. In the long term, this building will accommodate up to 150 scientists conducting research on nervous system diseases such as Alzheimer's or Parkinson's to develop new preventative, diagnostic and therapeutic strategies.

In January Federal Research Minister Wanka and Science Minister Bauer of the state of Baden-Württemberg visited the Hertie Institute for Clinical Brain Research and took the opportunity to learn about current research projects.

On Dec 1, 2016, the Hertie Institute for Clinical Brain Research celebrated its 15th anniversary. For his commitment to founding and developing the institute, the long-serving chairman of the non-profit Hertie Foundation, Dr. Michael Endres, was honored with the Leonhart Fuchs medal of the Faculty of Medicine Tübingen.

To foster the interaction between the CIN (Werner Reichardt Centre for Integrative Neuroscience), DZNE and HIH the a Neuroscience Campus Get Together was jointly set up in the year 2015 and successfully continued in the year 2016.

All these developments will ensure the long-term success of the neuroscience community in Tübingen.

Prof. Dr. Thomas Gasser  
 Prof. Dr. Mathias Jucker  
 Prof. Dr. Holger Lerche  
 Prof. Dr. Peter Thier  
 Prof. Dr. Ulf Ziemann

## Das Hertie-Institut für klinische Hirnforschung (HIH)

*15 Jahre nach seiner Gründung durch die Gemeinnützige Hertie-Stiftung, die Universität Tübingen und das Universitätsklinikum Tübingen gehört das HIH auf dem Gebiet der klinischen Hirnforschung zum Spitzenfeld europäischer Forschungseinrichtungen. Herausragende Forschungsergebnisse haben das Institut auch über die Grenzen Europas hinaus bekannt gemacht.*

*Das HIH besteht derzeit aus fünf Abteilungen: der Abteilung Neurologie mit Schwerpunkt neurovaskuläre Erkrankungen (Prof. Dr. med. Ulf Ziemann), der Abteilung Neurologie mit Schwerpunkt neurodegenerative Erkrankungen (Prof. Dr. med. Thomas Gasser), der Abteilung Neurologie mit Schwerpunkt Epileptologie (Prof. Dr. med. Holger Lerche, der Abteilung Kognitive Neurologie (Prof. Dr. med. Hans-Peter Thier) und der Abteilung für Zellbiologie Neurologischer Erkrankungen (Prof. Dr. sc. nat. Mathias Jucker). Die ersten drei Genannten sind bettenführende Abteilungen in der Neurologischen Klinik, die beiden Letztgenannten sind an der Patientenversorgung im Rahmen von Spezialambulanzen beteiligt. Die klinischen Abteilungen sind für die Versorgung von Patienten mit der gesamten Breite neurologischer Erkrankungen gemeinsam verantwortlich.*

*In den Abteilungen sind zurzeit 16 Professoren und etwa 350 Mitarbeiter in 33 Arbeitsgruppen tätig, wovon zwei unabhängige Forschungsgruppen darstellen.*

*Die Arbeitsschwerpunkte des HIH liegen im Bereich neurodegenerativer und entzündlicher Hirnerkrankungen, der Schlaganfallforschung, Epilepsien und der Erforschung der Grundlagen und Störungen von Wahrnehmung, Motorik und Lernen. Zu den bedeutenden Forschungserfolgen des HIH zählen die Entdeckung wichtiger genetischer und molekularer Grundlagen der Entstehung und Progression neurologischer Erkrankungen. Das HIH, ein Modellprojekt für Public Private Partnership, hat auch im Jahr 2016 rund 6,6 Millionen Euro an Drittmitteln eingeworben und 205 Veröffentlichungen in wissenschaftlichen Fachzeitschriften publiziert. Diese Zahlen belegen unter anderem die wissenschaftliche Leistungsfähigkeit des Zentrums. Die Gemeinnützige Hertie-Stiftung wendete bisher rund 41 Millionen Euro für das HIH auf und wird ihre Förderung fortsetzen.*

*Auch strukturell geht das HIH neue Wege. Die Reformansätze gelten vor allem drei Schwerpunkten: Die Einrichtung einer Department-Struktur, die Einrichtung eines Pools von flexibel und kurzfristig einsetzbaren Fördermitteln und der Aufbau eines Modells für eine leistungsabhängige Prämie für alle Mitarbeiter.*



In den Abteilungen sind zurzeit 16 Professoren und etwa 350 Mitarbeiter in 33 Forschungsgruppen tätig. Die Gemeinnützige Hertie-Stiftung wendete bisher rund 41 Millionen Euro für das HIH auf und wird ihre Förderung fortsetzen.

Im Januar besuchten die Bundesministerin für Bildung und Forschung, Professorin Johanna Wanka, und die baden-württembergischen Ministerin für Wissenschaft, Forschung und Kunst, Theresia Bauer, das Hertie-Institut für klinische Hirnforschung der Universität und des Universitätsklinikums Tübingen. Sie informierten sich dort gemeinsam über aktuelle Forschungsprojekte.

Das Hertie-Institut für klinische Hirnforschung feierte im Dezember 2016 sein 15-jähriges Bestehen. Beim Festakt zum Jubiläum ist der langjährige Kuratoriumsvorsitzende der Gemeinnützigen Hertie-Stiftung, Dr. Michael Endres, für sein Engagement bei der Gründung und Entwicklung des Instituts mit der Leonhart-Fuchs-Medaille der Medizinischen Fakultät Tübingen ausgezeichnet worden.

Eine besondere Bedeutung für die Zukunft des Zentrums kommt auch seiner Beteiligung an der erfolgreichen Bewerbung von Tübingen als Partnerstandort des „Deutschen Zentrums für Neurodegenerative Erkrankungen, DZNE“ zu. Die Etablierung dieses Partnerstandortes führt zu einer erheblichen Stärkung des neurowissenschaftlichen Standorts. Mit dem Bezug des Neubaus des DZNE bezogen in direkter Nachbarschaft konnte die enge Zusammenarbeit weiter ausgebaut werden. Um die Interaktion zwischen den neurowissenschaftlichen Instituten am Standort Tübingen zu stärken, wurde 2015 ein Neuroscience Campus Get Together gemeinsam mit dem Deutschen Zentrum für Neurodegenerative Erkrankungen (DZNE) und dem Werner Reichardt Centre for Integrative Neuroscience (CIN) initiiert und im Jahr 2016 erfolgreich fortgeführt.

*Prof. Dr. Thomas Gasser  
Prof. Dr. Mathias Jucker  
Prof. Dr. Holger Lerche  
Prof. Dr. Peter Thier  
Prof. Dr. Ulf Ziemann*

# University Hospital of Neurology



## Clinical Staff

### HEAD OF NURSING SERVICES

Dr. Renate D. Fuhr  
(Head of Nursing Services)

Doris Stenske-Bader  
(Deputy Head of Nursing Services)

Adriana Hurcikova  
(Division Manager, Ward 46/24/27)

Bärbel Hauger (until 10/2016)  
(Deputy Division Manager,  
Ward 46/24/27)

Simone Ochieng  
(Deputy Division Manager,  
Ward 46/24/27)

Christine Reuter  
(Ward Manager, Ward 20)

Annette Mögle  
(Deputy Ward Manager, 20)

### WARD 46

Ronja Bühler  
Annette Eisele  
Joann Gallo  
Anja Hutter  
Corinne Kalmbach  
Gabriele Kern-Braun  
Renate Maier-Korneck  
Bettina Mollenhauer  
Ilse Polack  
Ulrike Rein  
Iris Sadowski  
Sarah Schneider  
Ulrike Schweizer  
Gudrun Siegl  
Birgit Weimar

### WARD 43

Luther Basa  
Jane Buo  
Meike Besser  
Önder Bilen  
Roslyn Chin  
Friedhelm Chmell  
Rebecca Fais  
Maria Flohr  
Annika Hesse  
Alice Hoffmann  
Britta Kallenberger  
Eva Kern  
Jürgen Kronmüller  
Dorothe Pacholleck  
Sina Westbomke  
Stephanie Zanfardino



## WARD 44 INTENSIVE CARE/ STROKE UNIT

Andrea Albrecht  
Nina Begemann  
Luisa Bisinger  
Karin Brunner  
Ana-Maria Cheregi  
Jessica Deile  
Tobias Göttermann  
Kathrin Gray  
Susanne Grumann  
Carmen Haag  
Frank Hauber  
Marc-Sebastian Haug  
Stefanie Herholz  
Regina Johner  
Petra Kaschowitz  
Ines Lange  
Giusi Marchese  
Nina Melzer  
Christine Moosmann  
Birgit Moryson  
Markus Müller  
Petra Nipprasch  
Simone Ochieng  
Heidi Riescher  
Claudia Romeikat  
Thomas Rottmann  
Mirjam Schäfer  
Johann Schmuck  
Lena Seelmann  
Tanja Striebich  
Marlene Wamsler-Lutz  
Angelika Weber  
Gerda Weise  
Eva Wener-Buck  
Dieter Zeller  
Ulrike Zimmermann

## WARD 45

Johanna Eisele  
Isaac Emwinghare  
Tatjana Graz  
Werner Hansen  
Sigrid Herter  
Michael Heymann  
Carolyn Klebitz  
Beate Kloster  
Olga Krämer  
Stefanie Kurz  
Andrea Langmann  
Alisa Mansour-Tokovic  
Banu Sahin  
Hans Jürg Scholpp  
Karola Schweinbenz  
Anja Siegle  
Isabel Utsch Sellnow  
Sina Westbohmke

## NURSING ASSISTANTS

Tamazur Allouch  
Leonie Czech  
Lisa Hermann  
Christopher Kübler  
Gabriele Layla  
Emely Paul  
Carolyn Schmitt  
Maritta Weipert

## CASE/OCCUPANCY MANAGEMENT

Ulrich Braun  
Silvia Clement  
Wilhelm Eissler  
Christina Tomschitz  
Isabel Utsch-Selinow

## TECHNICIANS

Margarete Dengler (Nurse)  
Anke Deutsch (EP)  
Evelyn Dubois (CFS Chemistry)  
Siegfried Ebner (CSF Chemistry)  
(until 10/2016)  
Irina Köhnlein (Nurse)  
Renate Mahle (EEG Neurosonography)  
Yvonne Schütze  
(Neurosonography, EP)  
Veronika Serwotka (Nerve conduction)  
Elke Stransky (CSF Chemistry)  
Deborah Tünnerhoff-Barth  
(Nerve conduction)  
Nathalie Vetter  
(ENG Neurosonography)  
Kathrin Vohrer (EEG, EP)  
Barbara Wörner (EEG)

## SECRETARIES

Ina Baumeister  
Dr. Patricia Beck  
Jutta Eymann  
Dagmar Heller-Schmerold  
Isolde Marterer  
Christine Riegraf  
Susanne Stimmler  
Diana Thomma  
Doris Wieder

## MEDICAL DOCUMENTATION

Sonja Brandner (until 05/2016)  
Christine Brick  
Horst Feuerbacher  
Dr. Katharina Friebe  
Martina Pabst

# Department of Neurology and Stroke



## Clinical and Scientific Staff

### HEAD OF THE DEPARTMENT

Prof. Dr. Ulf Ziemann

### GROUP LEADERS/ATTENDING PHYSICIANS

Prof. Dr. Hermann Ackermann  
Dr. Markus Krumbholz  
Prof. Dr. Christine Meyer-Zürn (Cardiologist)  
Dr. Florian Müller-Dahlhaus  
(100% until 07/2016, 10% after 07/2016)  
Prof. Dr. Ulrike Naumann  
Dr. Sven Poli, MSc  
Dr. Dennis Schlak (50% since 04/2016)  
Prof. Dr. Dr. Ghazaleh Tabatabai  
(Interdisciplinary Division of Neuro-Oncology)

### SCIENTISTS/RESIDENTS

Dr. Paolo Belardinelli  
Dr. Til Ole Bergmann  
Dr. Corinna Blum  
Dr. Susanne Dietrich  
Mohamed Yasser Elnaggar  
Dr. Kirsi Forsberg (until 07/2016)  
Irina Gepfner-Tuma  
Dr. Parameswari Govindarajan  
Florian Härtig  
Prof. Dr. Ingo Hertrich  
Dr. Marilyn Koch  
Dr. Margarethe Paech (since 09/2016)  
Dr. Justyna Przystal (since 07/2016)  
Elisabeth Rexer (since 08/2016)  
Martin Ribitsch  
Dr. Hardy Richter  
Dr. Christina Roggia  
Dr. Christoph Ruschil  
Dr. Dennis Schlak (until 03/2016)  
Maria-Ioanna Stefanou  
Johannes Tünnerhoff  
Charlotte Weyland (since 02/2016)  
Dr. Martin Wolf  
Dr. Lena Zeltner (until 11/2016)  
Dr. Carl Moritz Zipser  
Dr. Brigitte Zrenner  
Dr. Christoph Zrenner

## TECHNICAL STAFF/ADMINISTRATION

Dipl.-Ing. Rüdiger Berndt (Electronics,  
together with the Dept. of Cognitive Neurology)  
Dilan Celik (until 09/2016)  
Evelyn Dubois  
Siegfried Ebner  
Sarah Hendel  
Marion Jeric  
Gabriele Kuebart  
Fotini Scherer  
Petra Schroth (until 03/2016)  
Elke Stransky  
Julia Zeller

## MEDICAL DOCTORAL STUDENTS

Elina Brendle (Supervisor Prof. Dr. Dr. Tabatabai)  
Elena Dangel (Supervisor Prof. Dr. Dr. Tabatabai)  
Hulda Ewald (Supervisor Prof. Dr. Dr. Tabatabai)  
Juliane Ebert (Supervisor Prof. Dr. Dr. Tabatabai)  
Jakob Ehlers (Supervisor Prof. Dr. Naumann)  
Hanna Faber (Supervisor Prof. Dr. Ziemann)  
Katharina Hadaschik  
(Supervisors Prof. Dr. Ziemann, Dr. Poli)  
Ilona Hoberg (Supervisor PD Dr. Bischof)  
Yeho-Irae Kim (Supervisor Prof. Dr. Ziemann)  
Julia Elisabeth Király (Supervisor Prof. Dr. Ziemann)  
Franca Koenig (Supervisor Prof. Dr. Ziemann)  
Natalya Korinetsko (Supervisor Prof. Dr. Dr. Tabatabai)  
Chen Liang (Supervisor Prof. Dr. Ziemann)  
Anne Lieb (Supervisor Prof. Dr. Ziemann)  
Philipp Nakov (Supervisor PD Dr. Bischof)  
Katrin Schulz (Supervisor PD Dr. Bischof)  
Claudius Speer (Supervisor PD Dr. Bischof)  
Charlotte Spencer (Supervisor Prof. Dr. Ziemann/Dr. Poli)  
Jakob Spogis (Supervisor Prof. Dr. Ziemann)  
Natalia Tveriakhina (Supervisor PD Dr. Bischof)  
Benjamin Walz (Supervisor PD Dr. Bischof)  
Xueyu Yang (since 10/2015;  
Supervisor Prof. Dr. Ziemann)

## PHD STUDENTS

Angela Armento (Supervisor Prof. Dr. Naumann)  
Denis Canjuga (since 11/2016;  
Supervisor Prof. Dr. Dr. Tabatabai)  
Ghazal Darmani (Supervisor Prof. Dr. Ziemann)  
Debora Desideri (Supervisor Prof. Dr. Ziemann)  
Srinath Rajaraman (Supervisor Prof. Dr. Dr. Tabatabai)  
Sonja Schötterl (Supervisor Prof. Dr. Naumann)  
Yi Wang (Supervisor Prof. Dr. Ziemann)

## MASTER STUDENTS

Maryam Geranmayeh (Supervisor Prof. Dr. Hertrich)  
Anna-Lena Kast (Supervisor Prof. Dr. Hertrich)  
Bingshuo Li (Supervisors Prof. Dr. Schwarz, Prof. Dr. Ziemann)  
Alisa Selent (Supervisor Prof. Dr. Hertrich)  
Rajka Sieger (Supervisor Prof. Dr. Dr. Tabatabai)

## PROFESSORSHIP FOR NEUROREHABILITATION

Prof. Dr. Hermann Ackermann  
Prof. Dr. Ingo Hertrich

## Clinical Studies

### STROKE STUDIES

**ACTION II (EudraCT: 2015-004783-11):** 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: Dr. Sven Poli*

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

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

**CL1-44819-004:** Randomized Efficacy and Safety Trial with Oral S 44819 after Recent Ischemic Cerebral Event  
*Investigator: Prof. Dr. Ulf Ziemann*

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

**DS1040\_A\_U103:** Safety, Pharmacokinetics and pharmacodynamics of DS1040B in Subjects with Acute Ischemic Stroke  
*Investigator: Dr. 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: Dr. Sven Poli*

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

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

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

**Prodast:** Prospective Record Of the use of Dabigatran in patients with Acute Stroke or TIA  
*Investigator: Dr. Sven Poli*

**RASUNOA-Prime:** Register für Akute Schlaganfälle Unter Neuen Oralen Antikoagulantien - Prime  
*Investigator: Dr. 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: Dr. 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: Dr. Sven Poli*

**Risikostratifizierung von Schlaganfallpatienten durch Analyse der autonomen Funktion (AKF-Programm)**  
*Investigators: Prof. Dr. Christine Meyer-Zürn, PD Dr. 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: Dr. Sven Poli, Prof. Dr. 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: Dr. 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: Dr. 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: Dr. Markus Krumbholz*

**CASTING** (EudraCT-Nr. 2015-005597-38): A study of Ocrelizumab in participants with Relapsing Remitting Multiple Sclerosis (RRMS) who have had a suboptimal response to an adequate course of Disease-Modifying Treatment (DMT)

*Investigator: Ulf Ziemann*

**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: Dr. 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: Dr. 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

*Investigator: Dr. 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: PD Dr. Felix Bischof*

### **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: Dr. 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: Prof. Dr. Ulf Ziemann*

### **Competence Network MS – Concerted Action on Biomarker for Individualized Multiple Sclerosis Therapy in Germany (Control MS):**

Prospective cohort study in patients with clinically isolated syndrome (CIS) and early-stage multiple sclerosis.

*Investigator: Prof. Dr. 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: Prof. Dr. Ulf Ziemann*

**Pangaea 2.0** (CFTY720DDE26): Post-Authorization Non-interventional German treatment benefit study of GilEnYA in MS).

*Investigator: Dr. Markus Krumbholz*

**REGIMS Register:** Ein Immuntherapieregister zur Verbesserung der Arzneimittelsicherheit in der MS-Therapie

*Investigator: Dr. Markus Krumbholz*

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

*Investigator: Prof. Dr. Ulf Ziemann*

## Clinical Studies

### NEUROIMMUNOLOGY STUDIES

**TRUST** (GER-TYS-14-10626): Eine multizentrische, prospektive, nicht-interventionelle Studie zur Untersuchung der Auswirkung eines integrierten Patientenmanagements, inklusive Biomarkern, Magnetresonanztomographie und Expertenrat auf den Krankheitsverlauf bei Patienten mit schubförmiger Multipler Sklerose, die seit mindestens 12 Monaten mit TYSABRI behandelt wurden.

*Investigator: Dr. Markus Krumbholz*

**Vision** (EudraCT-Nr. 2014-000395-26): A 3-year open-label, exploratory, single arm study to describe long term changes in the visual system of patients with relapsing remitting multiple sclerosis (RRMS) on oral dimethyl fumarate (VISION).

*Investigator: Prof. Dr. 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: Prof. Dr. 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: Prof. Dr. 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: Prof. Dr. Ulf Ziemann*

### NEUROONCOLOGY STUDIES RECRUITING TRIALS (OPEN FOR ENROLLMENT)

**BMS CA 209-498** (NCT02617589): Phase III trial of Nivolumab Compared to Temozolomide, Given With Radiation Therapy, for Newly-diagnosed Patients With Unmethylated Glioblastoma (GBM, a Malignant Brain Cancer) (CheckMate 498)

*Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai*  
Sponsor: BMS

**BMS-CA209-548** (NCT02667587): Study of Temozolomide Plus Radiation Therapy With Nivolumab or Placebo, for Newly Diagnosed Patients With Glioblastoma (GBM, a Malignant Brain Cancer) (CheckMate548)

*Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai*  
Sponsor: BMS

**AbbVie M13-813** (NCT02573324): A study of ABT-414 in subjects with newly diagnosed Glioblastoma (GBM) with Epidermal Growth Factor Receptor (EGFR) amplification (Intelligence 1)

*Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai*  
Sponsor: RTOG and AbbVie

**iMRI/5-ALA**: A parallel group phase II trial to investigate maximum extent of resection based on iMRI versus 5-ALA  
*Lead Principal Investigators: PD Constantin Roder, Prof. Dr. Marcos Tatagiba*  
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 in Tübingen: Prof. Dr. Daniel Zips,*  
Sponsor: University Hospital Heidelberg

**NOA-10** (NCT01252459): Amino-acid PET versus MRI-guided re-irradiation in patients with recurrent Glioblastoma Multiforme (GLIOMA)

*Investigator in Tübingen: Prof. Dr. Daniel Zips*  
Sponsor: University Hospital Freiburg

**NOA-16** (NCT02454634): Phase I trial of IDH1-peptide vaccine in IDH1R132H-mutated grade III-IV gliomas  
*Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai*  
Sponsor: University Hospital Heidelberg

**Bayer 18239** (NCT02746081): Phase I study of BAY1436032 in Isocitrate Dehydrogenase-1 (IDH1)-mutant advanced solid tumors  
*Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai*  
Sponsor: Bayer

**EORTC 1320:** Phase II trial in atypical and anaplastic meningioma  
*Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai*  
Sponsor: EORTC

## NEUROONCOLOGY STUDIES TRIALS IN TREATMENT AND FOLLOW-UP PHASE (ENROLLMENT CLOSED)

**EORTC1410/AbbVie M14-483** (NCT02343406): ABT-414 Alone or ABT-414 Plus Temozolomide vs. Lomustine or Temozolomide for recurrent glioblastoma (INTELLANCE 2)  
*Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai*  
Sponsor: EORTC

**CINC280X2204** (NCT01870726): Safety and efficacy of INC280 and Buparlisib (BKM120) in patients with recurrent glioblastoma  
*Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai*  
Sponsor: Novartis

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

**CeTeG** (NCT01149109): Efficacy and safety study of Lomustine/Temozolomide combination therapy versus standard therapy for glioblastoma patients  
*Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai*  
Sponsor: University Hospital Bonn

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

**EORTC 26101** (NCT01290939): Bevacizumab and Lomustine for Recurrent GBM  
*Investigator: Prof. Dr. Dr. Ghazaleh Tabatabai*  
Sponsor: EORTC

## 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: Prof. Dr. Ingo Hertrich*

Funding institution: Deutsche Forschungsgemeinschaft (DFG)

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

*Project leaders: Prof. 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-assoziiierter Gefäße exprimierten EMT-Faktoren SLUG, SNAIL und TWIST**

*Project leader: Prof. Dr. Ulrike Naumann*

Funding institution: Henriette und Otmar Eier-Stiftung, IZKF Promotionskolleg

#### **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

#### **Berufung von Spitzenmedizinern aus dem Ausland**

*Project leader: Prof. Dr. Dr. Ghazaleh Tabatabai*

Funding institution: Else Kröner Fresenius Stiftung/ German Scholars Organization

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

*Project leader: Prof. Dr. Dr. Ghazaleh Tabatabai*

Funding institution: Medical Faculty Tübingen

#### **Individualizing the treatment of CNS Metastases**

*Project leader: Prof. Dr. Dr. Ghazaleh Tabatabai*

Funding institution: Medical Faculty Tübingen

#### **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 leaders: Prof. Dr. Ulf Ziemann, Prof. Dr. Markus Siegel*

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



**Bewegungsverklängerung zur Rehabilitation der Armmotorik nach Schlaganfällen**

*Project leaders: 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)

**Implantable, bidirectional brain-computer-interface for restoration of motor functions (MOTOR-BIC)**

*Leaders for Tübingen Project: Prof. Dr. Niels Birbaumer, Prof. Dr. Ulf Ziemann*  
Funding institution: BMBF

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

*Project leaders Prof. Dr. Meinrad Gawaz, Prof. Dr. Christian Schlensak, Prof. Dr. Ghazaleh Tabatabai, Prof. Dr. Ulf Ziemann*  
Funding institution: Medical Faculty Tübingen

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

*Project leader: Prof. Dr. Ulf Ziemann*  
Funding institution: Institut de Recherches Internationales Servier (I.R.I.S.)

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

*Project leader: Prof. Dr. Tobias Geisler, Prof. Dr. 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**

*Project leaders: Prof. Dr. Ulf Ziemann, Prof. Dr. Daniela Berg, Prof. Dr. Christoph Laske*  
Funding institution: Janssen Pharmaceuticals NV

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

*Project leaders: Dr. Christoph Zrenner*  
Funding institution: Medical Faculty University Tübingen, fortune Program

**NEW GRANTS**

**Penumbral Rescue by normobaric O<sub>2</sub> Administration in patients with ischemic Stroke and target mismatch profile. A phase II Proof-of-Concept Trial**

*Project leader: Dr. Sven Poli*  
Funding institution: European Commission

**EKFS-Forschungskolleg „Therapieresistenz solider Tumore“**

*Project leader: Prof. Dr. Ghazaleh Tabatabai*  
Funding institution: Else Kröner Fresenius-Stiftung

**Transcranial magnetic stimulation; Electroencephalography; TMS-EEG; human cortex; excitability; neuropharmacology; glutamatergic system; GABAergic system; voltage-gated ion channels; anticonvulsants (ZI 542/9-1)**

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

## Awards

**Prof. Dr. Ulf Ziemann**

Listing "Top Physicians 2016" (Guter Rat)

## Medical Theses

(Completed in 2016)

Sandra Nadine Falkvoll

**Angioplastie und Stentung extrakranieller Stenosen der A. carotis interna – Retrospektive Analyse der Langzeitprognose**

*Supervisor: PD Dr. Felix Bischof*

## Master Theses

(Completed in 2016)

Maryam Geranmayeh

**Connecting the intelligibility of speech to linguistic and cognitive measures of complexity: Perception of accelerated synthetic speech**

*Supervisor: Prof. Dr. Ingo Hertrich*

Marko Susi

**Influence of Radiation on the Therapy of Glioblastoma with the YB-1 Dependent Oncolytic Virus Ad-Delo3-RGD**

*Supervisor: Prof. Dr. Ulrike Naumann*

## Bachelor Theses

(Completed in 2016)

Selina Mayer

**Spiegelneuronen oder Sprachwahrnehmung – Ein Vergleich der Motortheorie und des generellen auditorischen Ansatzes**

*Supervisor: Prof. Dr. Ingo Hertrich*

Ronaldo Rodrigues Correia

**Zur Lokalisation sprachrelevanter Hirnareale durch invasive Hirnkartierung**

*Supervisor: Prof. Dr. Ingo Hertrich*

Bernadett Bettina Ruza

**Wissen, was im Anderen vorgehen könnte. Theory of Mind bei Menschen mit Asperger-Syndrom, kognitive und emotionale Empathie in Dialogen**

*Supervisor: Prof. Dr. Ingo Hertrich*

Anne Toursel

**Kommunikationsstörungen bei Morbus Parkinson - Welchen Einfluss haben nicht-motorische Beeinträchtigungen auf den Kommunikationsablauf?**

*Supervisor: Prof. Dr. Ingo Hertrich*

## Conferences & Workshops

### **GLIOMA 2016**

University Hospital Tübingen, 27.01.2016

*Scientific Coordinator: Prof. Dr. Dr. Ghazaleh Tabatabai*

### **First Joint Meeting of the Universities of Tübingen & Sao Paulo Medical Schools**

University Hospital Tübingen, 20.-21.05.2016

*Scientific Coordinators: Prof. Dr. Dr. Ghazaleh Tabatabai,  
Prof. Dr Marcos Tatagiba*

### **Tübinger Therapiefortbildung Neurologie**

University Hospital Tübingen, 02.07.2016

*Scientific Coordinator: Prof. Dr. Dr. Ghazaleh Tabatabai*

### **Tübinger Neurovaskuläres Symposium**

University Hospital Tübingen, 16.11.2016

*Scientific Coordinator: Prof. Dr. Ulf Ziemann*

## Guest Researchers

**Dr. Francisco Meraz Torres** (Scholarship CONACYT, Mexico)

*Host: Prof. Dr. Naumann*

**Prof. Dr. Luis Velazquez-Perez, Cuba**

(Awardee of a Georg Forster Research Award  
of the Alexander-von-Humboldt Foundation)

*Host: Prof. Dr. Ulf Ziemann*

# Department of Neurology and Epileptology



## Clinical and Scientific Staff

### HEAD OF THE DEPARTMENT

Prof. Dr. Holger Lerche

### GROUP LEADERS/ATTENDING PHYSICIANS

PD Dr. Niels Focke  
PD Dr. Tobias Freilinger  
PD Dr. Alexander Grimm  
Prof. Dr. Yvonne Weber  
Dr. Snezana Maljevic (until 02/2016)  
Prof. Dr. Marcel Dihné

### SCIENTISTS/RESIDENTS

Eva Auffenberg  
Felicitas Becker  
Dr. Nele Dammeier  
Dr. Caroline Freilinger (until 10/2016)  
Samira Hamzehian  
Dr. Ulrike Hedrich  
Elgin Hoffmann (since 11/2016)  
Josua Kegele  
Dr. Silke Klamer  
Kevin Klett  
Dr. Henner Koch  
Dr. Stefan Lauxmann  
Christina Lipski  
Dr. Yuanyuan Liu  
Florian Lutz  
Dr. Pascal Martin  
Dr. Justus Marquetand  
Dr. Cristina Niturad  
Dr. Julian Schubert  
Dr. Victoria Schubert  
Dr. Niklas Schwarz  
Debora Vittore  
Dr. Nathalie Winter  
Dr. Stefan Wolking  
Dr. Thomas Wuttke

## TECHNICAL STAFF/ ADMINISTRATION

Dr. Patricia Beck  
Ana Fulgencio-Maisch  
Christian Hengsbach  
Heidrun Löffler  
Katja Michaelis  
Sarah Rau  
Susanne Stimmler  
Doris Wieder

## MD/PHD STUDENTS

Adham Elshahabi  
Ashish Kaul Sahib (until 09/2016)  
Merle Harrer  
Katharina Hof  
Haosi Huang  
Mahmoud Koko  
Robert Lauerer  
Philipp-Justus Lühns  
Raviteja Kotikalapudi  
Nicole Kusch  
Harshad Pannikkaveettil Ashraf  
Siona Pfeffer  
Filip Rosa  
Niklas Schwarz  
Theresa Simperl  
Niklas Vogel  
Anna Wagner  
Pu Yan

## INTERNSHIPS

Bader Alshaikh  
*Supervisors: Dr. Cristina Niturad,  
Dr. Snezana Maljevic*

Janine Brandes  
*Supervisor: Dr. Henner Koch*

Lisa Kirchberger  
*Supervisors: Dr. Yuanyuan Liu,  
Dr. Snezana Maljevic*

Nikolaos Maragkos  
*Supervisor: Dr. Henner Koch*

Lena Rüschtroer  
*Supervisors: Dr. Ulrike Hedrich,  
Dr. Julian Schubert*

Kirsten Torge  
*Supervisor: Dr. Ulrike Hedrich*

Betül Uysal  
*Supervisors: Dr. Ulrike Hedrich,  
Dr. Niklas Schwarz*

## Clinical Studies

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

**VALUE / 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*

**BASE / 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 / EP0045:** 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*

**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*

**GM-11** – a randomized, multicenter, double-blind, parallel, sham-controlled study of the gammaCore®-R, a non-invasive neurostimulator device, for the prevention of episodic migraine  
*Investigator: PD Dr. Tobias Freilinger*

**REGAIN / I5Q-MC-CGAI** – a phase 3, randomized, double-blind, placebo-controlled study of LY2951742 in patients with chronic migraine  
*Investigator: PD Dr. Tobias Freilinger*

**EVOLVE-2 / I5Q-MC-CGAH** – a phase 3, randomized, double-blind, placebo-controlled study of LY2951742 in patients with episodic migraine  
*Investigator: PD Dr. Tobias Freilinger*

## Third-Party Funding

### ONGOING GRANTS

#### 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 institutions: Centre for Rare Diseases, Tübingen; AKF (Angewandte Klinische Forschung), 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)

#### Exist Gründerstipendium

Epilog: Etablierung eines Devices zur Anfallsdeduktion

*Project leader: Prof. Dr. Y. Weber*

Funding institution: Bundesministerium für Wirtschaft und Energie (O3EGSBW299)

#### 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)

### NEW GRANTS

#### 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)

#### Entwicklung eines Anfallsdetektors

*Project leader: Prof. Dr. Y. Weber*

Funding Institution: Junge Innovatoren Programm, Karlsruher Institut für Technologie (I12916, Monikit)

#### Netzwerk-Bildgebung bei Genetischer Epilepsie

*Project leader: PD Dr. Niels Focke*

Funding Institution: German Research Foundation (DFG) (FO 750/5-1)

## PhD Theses

(Completed in 2016)

Cristina Niturad

**GABAergic mechanisms in epilepsy and contribution of the ClC-2 chloride channel to neuronal excitability**

*Supervisor: Prof. Dr. Holger Lerche*

## MD Theses

(Completed in 2016)

Stephan Lauxmann

**Ein erhöhter "Subschwellen"-Natrium-Strom als neuer Mechanismus einer familiären Epilepsie mit einer SCN2A Mutation**

*Supervisors: Dr. Ulrike Hedrich, Prof. Dr. Holger Lerche*

Niklas Schwarz

**Epilepsie und episodische Ataxie durch zwei synergistische Natriumkanalmutationen**

*Supervisors: Dr. Ulrike Hedrich, Prof. Dr. Holger Lerche*

## Master Theses

(Completed in 2016)

Bader Alshaikh

**Functional consequences of GABA receptor mutations associated with epilepsy**

*Supervisors: Dr. Cristina Niturad, Dr. Snezana Mlajevic*

Lena Rüschtroer

**Investigation of the activity generated in the Pre Bötzing Complex in mice with a mutation in the Scn1a gene and its possible connection to sudden unexpected death in epilepsy**

*Supervisor: Dr. Henner Koch*

## Bachelor Theses

(Completed in 2016)

Janine Brandes

**The effect of antiepileptic drugs on respiratory activity generated in the pre-Bötzing Complex**

*Supervisor: Dr. Henner Koch*

## Conferences & Workshops

**Young Neurologists Summer School 2016**

Tübingen, 01.-05.08.2017

*Scientific Coordinators: Prof. Dr. Holger Lerche, Dr. Justus Marquetand, Felix Bernhard*

## Guest Researchers

**Sandra Kruszynski (PATE)**

*Host: Dr. Henner Koch*

**Ann-Kathrin Ruppert**

*Hosts: Prof. Dr. Holger Lerche, Dr. Julian Schubert*





# Department of Neuro- degenerative Diseases



## Clinical and Scientific Staff

### HEAD OF THE DEPARTMENT

Prof. Dr. Thomas Gasser

### DEPUTY HEAD OF THE DEPARTMENT

Prof. Dr. Ludger Schöls

### GROUP LEADERS/ATTENDING PHYSICIANS

Prof. Dr. Daniela Berg  
Dr. Dr. Saskia Biskup  
Dr. Dr. Michela Deleidi  
Prof. Dr. Philipp Kahle  
Prof. Dr. Rejko Krüger (group leader at large since 06/2014)  
Prof. Dr. Walter Maetzler  
Dr. Rebecca Schüle  
Dr. Javier Simón-Sánchez (jointly with DZNE)  
PD Dr. Matthias Synofzik  
PD Dr. Daniel Weiss

## SCIENTISTS/RESIDENTS/PHD STUDENTS

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 Ulrike Ulmer  
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 Dr. Richard Wüst  
 Dr. Isabel Wurster  
 Dr. Rezzak Yilmaz  
 Milan Zimmermann

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## Clinical and Scientific Staff

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Madeline Nagel  
Rebecca Rinas  
Christin Schulze  
Patricia Sulzer

### DIPLOMA STUDENTS

Max Güldner  
Christiane Halder  
Philip Höflinger  
Rahel Lewin

### BUNDESFREIWILLIGEN-DIENSTLEISTERINNEN

Sina Kurz  
Ina Wiedmann

## 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*

**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: Dr. Kathrin Brockmann, 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: Dr. Kathrin Brockmann, Prof. Dr. Daniela Berg*

**ABC-PD:** monocenter longitudinal study on the predictive value of CSF alpha-pathology for PD dementia.  
*Investigators: PD Dr. Inga Liepelt-Scarfone, Prof. Dr. Daniela Berg, Prof. Dr. Walter Mätzler*

**DEMPARK / LANDSCAPE:** multicenter longitudinal observational study on dementia in Parkinson's disease.  
*Investigators: PD Dr. Inga Liepelt-Scarfone, Sara Becker, Prof. Dr. Daniela Berg*

**Kognitive Mechanismen der Blasenschwäche bei Morbus Parkinson**  
*Investigators: PD Dr. Inga Liepelt-Scarfone, Zuzanna Tkaczynska, Prof. Dr. Daniela Berg*

**TMS-AD:** An exploratory study assessing TMS plasticity deficits in patients with AD and aMCI in comparison to healthy controls  
*Investigators: Andrea Pilotto, PD Dr. Inga Liepelt-Scarfone, Patricia Sulzer, Prof. Dr. Daniela Berg*

**TREND-Studie** (Tübinger 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. Ebba Lohmann, 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*

## Clinical Studies

**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.

*Investigator:s 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, PD 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, PD 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

*Investigator: PD 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 B. Schulz (Aachen)*

**ESMI: European Spinocerebellar Ataxia Type 3/ Machado-Joseph Disease Initiative**

*Investigators: Prof. Dr. Ludger Schöls, PD Dr. Matthias Synofzik, Dr. Winfried Ilg*

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

*Investigators: Prof. Dr. Ludger Schöls, PD Dr. Matthias Synofzik, Prof. Dr. Thomas Klockgether (Bonn)*

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

*Investigators: PD Dr. Matthias Synofzik, Prof. Dr. Ludger Schöls*

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

*Investigators: PD Dr. Matthias Synofzik, Dr. Winfried Ilg*

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

*Investigators: PD Dr. Matthias Synofzik, Dr. Winfried Ilg*

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

*Investigators: PD Dr. Matthias Synofzik, Dr. Adam Vogel (University of Melbourne)*

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

*Investigators: PD Dr. Matthias Synofzik, Dr. Adam Vogel (University of Melbourne)*

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

*Investigators: PD Dr. Matthias Synofzik, Dr. Winfried Ilg*

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

*Investigator: Dr. Andrea Pilotto*

## Third-Party Funding

### ONGOING GRANTS

#### Landscape

*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 leaders: Prof. Dr. Daniela Berg,*

*Prof. Dr. Walter Maetzler, Prof. Dr. Olaf Riess (UKT)*

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

#### 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.

#### PPMI – The Parkinson’s Progression Markers Initiative

*Project leaders: Prof. Dr. Daniela Berg, Dr. Kathrin Brockmann*

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

#### PPMI – Amendment: Genetic PPMI

*Project leaders: Prof. Dr. Daniela Berg, Dr. Kathrin Brockmann*

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

#### PPMI Amendment – Cognitive categorization assessment

*Project leaders: Prof. Dr. Daniela Berg, Dr. Kathrin Brockmann*

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 leaders: Prof. Dr. Daniela Berg, Dr. Kathrin Brockmann*

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

#### P-PPMI – Prodromal subjects

*Project leaders: Prof. Dr. Daniela Berg, Dr. Kathrin Brockmann*

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

#### Subaward agreement: Cognition biomarkers

*Project leader: PD Dr. Inga Liepelt-Scarfone,*

*Prof. Dr. Daniela Berg*

Funding institutions: Mayo Clinic, 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: ParkinsonFond Deutschland GmbH

#### DAT-Imaging in LRRK2 gene carriers

*Project leaders: Prof. Dr. Daniela Berg, Dr. Kathrin Brockmann*

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

#### Progression markers in the suspected premotor phase and early Parkinson’s disease (Amendment 4 – MCI Cohort)

*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 leaders: PD Dr. Inga Liepelt-Scarfone,*

*Prof. Dr. Daniela Berg, Prof. Dr. Walter Maetzler*

Funding institution: Janssen Pharmaceutica NV

#### Kyowa-Study 6002-14

*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Kyowa Hakko Kirin Pharma

## Third-Party Funding

### ONGOING 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 Tübingen

#### **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 leaders: Prof. Dr. Daniela Berg, Dr. Kathrin Brockmann*

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)

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

*Project leaders: 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

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

*Project leaders: 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 leaders: Prof. Dr. Thomas Gasser,*

*Prof. Dr. Daniela Berg, Prof. Dr. Rejko Krüger*

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

#### **Tumorigenesis in LRRK2 associated Parkinson's disease**

*Project leaders: 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 leaders: Prof. Dr. Thomas Gasser, Dr. Saskia Biskup*

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

#### **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)

#### **Functional proteomics of mutant LRRK2 induced Parkinson's disease**

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

Funding institution: German Research Foundation (DFG)

#### **Genetic basis of Dystonia in Turkish families**

*Project leaders: Prof. Dr. Thomas Gasser, Dr. Ebba Lohmann*

Funding institution: German Research Foundation (DFG)

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

*Project leaders: Prof. Dr. Thomas Gasser (coordinator),*

*Prof. Dr. Rejko Krüger*

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



**Mitochondrial endophenotypes of PD (Mito-PD)**

*Project leaders: Prof. Dr. Thomas Gasser (coordinator),*

*Prof. Dr. Rejko Krüger, Prof. Dr. Daniela Berg*

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

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

*Project leaders: 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)

**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)

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

*Project leader: Prof. Dr. Philipp Kahle*

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)

**Virtual Institute: RNA dysmetabolism in ALS and FTD**

*Project leader: Prof. Dr. Philipp Kahle*

Funding institution: German Center for Neurodegenerative Diseases (DZNE)

**DZNE Crosscutting Project: Posttranslational Modifications of TDP-43**

*Project leader: Prof. Dr. Philipp Kahle*

Funding institution: NOMIS Foundation

**Genomweiter RNAi Screen der Parkin abhängigen Eliminierung von depolarisierten Mitochondrien**

*Project leader: Dr. Sven Geisler*

Funding institution: German Research Foundation (DFG)

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

*Project leaders: Prof. Dr. Thomas Gasser, Prof. Dr. Rejko Krüger*

Funding institution: German Research Foundation (DFG)

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

*Project leaders: Prof. Dr. Rejko Krüger, Prof. Dr. Thomas Gasser, PD Dr. Inga Liepelt-Scarfone*

Funding Institution: European Research Council – Horizon 2020

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

*Project leaders: Prof. Dr. Rejko Krüger, Prof. Dr. Philipp Kahle*

Funding Institution: German Center for Neurodegenerative Diseases (DZNE)

**Polyglutamine repeats and Parkinson's disease**

*Project leaders: Prof. Dr. Thomas Gasser, Prof. Dr. Rejko Krüger, Dr. Manu Sharma*

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

**SLC9A6/NHE6 in neurodegeneration in corticobasal syndrome**

*Project leader: Dr. Julia Fitzgerald*

Funding institution: fortune Programme, University of Tübingen

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

*Project leaders: Dr. Daniel Weiss, Prof. Dr. Alireza Gharabaghi, Prof. Dr. Rejko Krüger, Dr. Georgios Naros*

Funding institution: Medtronic

**Moving beyond**

*Project leader: Prof. Dr. Walter Maetzler*

Funding institution: EU Seventh Framework Programme (FP7)

## Third-Party Funding

### ONGOING GRANTS

**Fair-Park II: Conservative iron chelation as a disease-modifying strategy in Parkinson's disease: a multicentric, parallel-group, placebo-controlled, randomized clinical trial of deferiprone**

*Project leaders EKUT: Prof. Daniela Berg, Prof. Walter Maetzler*  
Funding institution: EU

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

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

**Genetic basis of hereditary spastic paraplegias**

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

**Next generation genetics of axonopathies HSP/ CMT genetics**

*Project leader: Dr. Rebecca Schüle*  
Funding institution: EU

**Alliance for Treatment in HSP and PLS**

*Project leader: Dr. Rebecca Schüle*  
Funding institution: Spastic Paraplegia Foundation (SPF)

**European HSP registry**

*Project leaders: Dr. Rebecca Schüle, Prof. Ludger Schöls*  
Funding institution: HSP Selbsthilfegruppe e.V.

**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 leaders: 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 leaders: Dr. Rebecca Schüle, Prof. Ludger Schöls*  
Funding institution: Förderverein für HSP-Forschung e.V.

**Natural history in Hereditary Spastic Paraplegia**

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

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

*Project leader: Dr. Rebecca Schüle*  
Funding institution: National Institutes of Health (NIH)

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

*Project leader: PD Dr. Matthias Synofzik*  
Funding institution: Interdisciplinary Center for Clinical Research (IZKF)

**Next-generation genetics of early-onset ataxias**

*Project leader: PD Dr. Matthias Synofzik*  
Funding institution: Interdisciplinary Center for Clinical Research (IZKF), fortune Programme

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

*Project leader: PD 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: PD 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: PD 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: PD 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: PD 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: PD Dr. Matthias Synofzik*

Funding institution: Actelion Pharmaceuticals

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

*Project leader: PD Dr. Matthias Synofzik*

Funding Institution: Center for Rare Diseases, Tübingen

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

*Project leader: PD Dr. Matthias Synofzik*

Funding Institution: Actelion Pharmaceuticals

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

*Project leader: PD Dr. Matthias Synofzik*

Funding Institution: Else Kröner Fresenius Stiftung

## NEW GRANTS

**NCER-PD – National Centre of Excellence in Research on Parkinson's Disease**

*Project leaders: Prof. Dr. Daniela Berg,*

*PD Dr. Inga Liepelt-Scarfone*

Funding institution: Fonds nationale de la Recherche Luxembourg / Université Luxembourg

**PPMI – Amendment 10**

*Project leaders: Prof. Dr. Daniela Berg, Dr. Kathrin Brockmann*

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

**PPMI – Amendment 11**

*Project leader: Dr. Kathrin Brockmann*

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

**The Edmond J. Safra Fellowship in Movement Disorders 2016**

*Project leader: Prof. Dr. Thomas Gasser*

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

**Identification of modulators of the PINK1/Parkin-dependent mitophagy by siRNA based high-content screening of mitochondrial Parkin translocation**

*Project leader: Dr. Sven Geisler*

Funding institution: ONO Pharmaceuticals

**ESMI: European Spinocerebellar Ataxia Type 3/ Machado-Joseph Disease Initiative**

*Project leader: Prof. Dr. Ludger Schöls*

Funding Institution: EU

**Genome Studies in Hereditary Spastic Paraplegia – Beyond the Exome**

*Project leader: Dr. Rebecca Schüle*

Funding institution: National Institutes of Health (NIH)

**PREPARE: Preparing therapies for autosomal recessive ataxias**

*Project leader: PD Dr. Matthias Synofzik*

Funding Institution: ERARE JTC Grant

## Awards

### **Dr. Kathrin Brockmann**

Clinical Scientist Research Grant, University of Tübingen

### **Dr. Julia Fitzgerald**

GlaxoSmithKline Travel Grant for GeoPD Meeting 2015 in Tokyo, Japan

### **Katharina Stegen**

EMBO Mechanisms of Neurodegeneration Meeting Poster Prize (1st prize) 2016 in Heidelberg, Germany, and GeoPD Meeting Poster prize (1st prize) 2016 in Belval, Luxembourg

## Conferences & Workshops

### **International Workshop “Transcranial Sonography (TCS) in Parkinsonian Syndromes”**

Tübingen, 01.-02.03.2016

*Scientific Coordinator: Prof. Dr. Daniela Berg*

### **Tom-Wahlig-Symposium for HSP Research**

Düsseldorf, 18.03.2016

*Scientific Coordinators: Prof. Dr. Ludger Schöls, Dr. Rebecca Schüle*

### **PPMI Information Event with Special guest Sohini Chowdhury, Vice president Michael J. Fox Foundation for Parkinson’s research**

Tübingen, 14.10.2016

*Scientific Coordinator: Dr. Kathrin Brockmann*

## PhD Theses

(Completed in 2016)

Andrés Caballero

### **Genomics of Hereditary Spastic Paraplegia**

*Supervisor: Dr. Rebecca Schüle*

## MD Theses

(Completed in 2016)

Alice Bernard

### **Gibt es den inflammatorischen Endophänotyp bei der Parkinson-Erkrankung? Assoziation von Genotyp, Entzündungsparametern und dem Parkinson-Phänotyp**

*Supervisor: Prof. Dr. Walter Maetzler*

Eva Grüner

### **β-Amyloidplasmakonzentrationen und Hyposmie in Assoziation zur Entwicklung von Alzheimer-Demenz**

*Supervisor: Prof. Dr. Daniela Berg*

Philipp Hemmann

### **Quantitative Erhebung distaler Motorik bei Parkinson-Patienten mit und ohne Mutation im LRRK2-Gen sowie klinisch nicht betroffenen LRRK2-Mutationsträgern und Gesunden**

*Supervisor: Prof. Dr. Daniela Berg*

Theofanis Ngamsri

### **Hyposmie in Assoziation zu Risikofaktoren und prodromal Markern für Morbus Parkinson in einer Population älter als 50 Jahre**

*Supervisor: Prof. Dr. Daniela Berg*

Senait Ogbamicael

### **Sensorbasierte Ganganalyse bei Parkinsonpatienten mit Mutation im Glukozerebrosidase Gen**

*Supervisor: Prof. Dr. Walter Maetzler*

Franziska Ott

### **Einflussfaktoren des Timed up and go Tests – eine Untersuchung von 1068 gesunden, älteren Probanden**

*Supervisor: Prof. Dr. Walter Maetzler*

Saskia Schattauer

### **Die Archimedes-Spirale – ein potentielles Werkzeug in der Früherkennung neurodegenerativer Erkrankungen? Testungen von Tremores in der TREND-Studie**

*Supervisor: Prof. Dr. Daniela Berg*

## Master Theses

(Completed in 2016)

Alena Bäumer

**Validierung des DASH (Depression-Ängstlichkeit-Schlafstörungen-Halluzinationen) Scores in Bezug zur Kognition bei der Parkinson-Erkrankung**

*Supervisor: PD Dr. Inga Liepelt-Scarfone*

Sara Becker

**The relationship between cognitive dysfunction, vascular risk factors, and white matter hyperintensities in Parkinson's disease**

*Supervisor: PD Dr. Inga Liepelt-Scarfone*

Dilara Halim

**Characterization of SLC9A6/NHE6 Mutations in Corticobasal Syndrome**

*Supervisor: Dr. Julia Fitzgerald*

Konstantina Kapoulou

**Mitochondrial turnover in PINK1-knockout hiPSCs-derived neurons and generation of Parkinson's disease mutant Q456X PINK1 hiPSCs via CRISPR-Cas9**

*Supervisor: Dr. Julia Fitzgerald*

Luise Liebig

**Validation of the Erlangen Test of Activities of Daily Living in Parkinson Patients**

*Supervisor: PD Dr. Inga Liepelt-Scarfone*

Christin Schulze

**Beta 2-Mikroglobulin, APOE, Neurofilament L und Kognition bei Parkinson-Patienten**

*Supervisor: Prof. Dr. Walter Maetzler*

Lisa Schwarz

**Mitochondrial Control via TRAPI and Protection in Parkinson's Disease**

*Supervisor: Dr. Julia Fitzgerald*

Marco Siekmann

**Calcium Imaging & Schizophrenia**

*Supervisor: Dr. Julia Fitzgerald*

Patricia Sulzer

**Validation of a new Montreal Cognitive Assessment scoring algorithm for diagnosis of Parkinson's Disease with mild cognitive impairment**

*Supervisor: PD Dr. Inga Liepelt-Scarfone*

## Bachelor Theses

(Completed in 2016)

Carina Arnold

**Genetic Variation in the Cholinergic Pathway in Healthy Elderly: Association with Static Balance**

*Supervisor: Prof. Dr. Walter Maetzler*

# Department of Cognitive Neurology



## Clinical and Scientific Staff

### HEAD OF THE DEPARTMENT

Prof. Dr. Hans-Peter Thier

### GROUP LEADERS/ATTENDING PHYSICIANS

Prof. Dr. Martin Giese  
Dr. Daniel Häufle (since 12/2016)  
Dr. Marc Himmelbach  
Prof. Dr. Uwe Ilg  
Prof. Dr. Dr. Hans-Otto Karnath  
Prof. Dr. Cornelius Schwarz  
PD Dr. Fahad Sultan (until 01/2016)

### SCIENTISTS/RESIDENTS

Dr. Alia Benali  
Dr. Arindam Bhattacharjee  
Johannes Blöchle  
Nadja Büchler  
Dr. Shubhodeep Chakrabarti  
Dr. Enrico Chiovetto  
Dr. Andrea Christensen  
Dr. Bianca de Haan  
Dr. Peter Dicke  
Dr. Tjeerd Dijkstra  
Dr. Dominik Endres (until 09/2016)  
Dr. Winfried Ilg  
Dr. Bettina Joachimsthaler (until 01/2016)  
Dr. Jindrich Kodl  
PD Dr. Axel Lindner  
Dr. Christine Pedroarena  
Dr. Jörn Pomper  
Dr. Maren Prass (until 08/2016)  
Dr. Dr. Silvia Spadacenta  
Gabriele Zaiser

**PHD DOCTORAL STUDENTS**

Ian Chong  
 Sonja Cornelsen (until 03/2016)  
 Amin Dadashi  
 Leonid Fedorov  
 Martina Feierabend  
 David Haslacher (05-09/2016)  
 Julian Hofmann  
 Mohammad Hovaidi Ardestani  
 Mohammad Khazali  
 Bingshuo Li  
 Dongyun Li (until 04/2016)  
 Joana Loureiro  
 Nicolas Ludolph  
 Haian Mao  
 Akshay Markanday  
 Simone Mölbert  
 Albert Mukovskiy  
 Maysam Oladazimi  
 Nikhil Prabhu  
 Hamidreza Ramezanpour  
 Manuel Roth  
 Lena Rüschoer  
 Cornelia Schatton (until 07/2016)  
 Sophia Schön  
 Azam Shahvaroughi-Faharani  
 Mohammad Shams Ahmar  
 Christoph Sperber  
 Oleg Spivak  
 Zong-Peng Sun  
 Nick Taubert  
 Maïke van Lessen (until 03/2016)  
 Shengjun Wen  
 Daniel Wiesen

**MEDICAL DOCTORAL STUDENTS**

Friedemann Bender  
 Maria Bither  
 Maria Sophie Breu  
 Zofia Fleszar  
 Julia Göddel  
 Carolin Holzbaur  
 Katharina Klaner  
 Karla Lauer  
 Sarah Louisa Merkel  
 Lena Stetz  
 Tine Stoll

**MASTER STUDENTS**

Mareike Gann  
 Annika Jahn  
 Peter Krämer  
 Sophie Laturus (until 06/2016)  
 Silvia de Maglie (until 06/2016)  
 Florian Ott (until 03/2016)  
 Christina Pley  
 Jannis Plöger  
 Thede Witschel

**TECHNICAL STAFF/ ADMINISTRATION**

Mirjana Angelovska  
 Ina Baumeister  
 Rüdiger Berndt  
 Dr. Friedemann Bunjes  
 Ute Großhennig  
 Dagmar Heller-Schmerold  
 Björn Müller  
 Ursula Pascht

## 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, PD 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, PD Dr. Matthias Synofzik*

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

*Investigators: Dr. 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: PD 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, PD 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 Ramezanpour, Prof. Dr. Hans-Peter Thier*

### **Auf kooperative Augen kommt es an — neuronale Grundlagen sozialer Interaktionen**

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

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

*Investigators: Ann-Christine Ehlis, Dr. 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, Dr. 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, Dr. Andrea Christensen and external partners*

### **‘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

**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)

**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)

**CogIMon – Cognitive Interaction in Motion**

(EU H2020-ICT-2014 644727)

*Project leader: Prof. Dr. Martin Giese*

Funding institution: EU

**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)

**Motor functions and connectivity of the superior colliculus**  
(HI 1371/1-2)

*Project leader: Dr. Marc Himmelbach*

Funding institution: German Research Foundation (DFG)

**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

**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)

**Videogame-based coordinative training in children with  
degenerative ataxia**

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

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

**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)

**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 leaders: Prof. Dr. Dr. Hans-Otto Karnath,*

*Prof. Dr. Martin Giese*

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

## Third-Party Funding

### ONGOING GRANTS

#### **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)

#### **Towards the neural basis of joint attention**

(TH 425/12-1)

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

Funding institution: German Research Foundation (DFG)

#### **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

### NEW GRANTS

#### **Neural mechanisms underlying the visual analysis of intent**

(RGP0036/2016)

*Project leader: Prof. Dr. Martin Giese*

Funding institution: Human Frontiers Science Program (HFSP)

#### **System Human Being: Multi-level modeling in motor control and rehabilitation robotics**

(33-7533.-30-20/7/2)

*Project leader: Dr. Daniel Häufle*

Funding institution: Ministerium für Wissenschaft, Forschung und Kunst Baden Württemberg (MWK)

#### **Pupils Lab for Neuroscience**

(P1150100)

*Project leader: Prof. Dr. Uwe Ilg*

Funding institution: Hertie Foundation

#### **Individuelle Erholung von kognitiven Defiziten nach Schlaganfall**

(KA 1258/23-1)

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

Funding institution: German Research Foundation (DFG)

#### **Investigating distortion of self-body perception in stroke and eating disorder patients**

*Project leaders: Prof. Dr. Hans-Otto Karnath,*

*Azam Shavarougi Fahaarani*

Funding institution: Vereinigung der Freunde der Universität e. V.

#### **Bewertung der Werkzeugfunktion bei Apraxie und semantischer Demenz – doctoral scholarship Sarah Louisa Merkel (2016-2-19)**

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

Funding institution: Interdisciplinary Center for Clinical Research Post Graduate Program

**Psychophysik und Kodierung des vibrotaktilen Signals  
im taktilen System von Ratte und Mensch**

(SCHW 577/14-1)

*Project leader: Prof. Dr. Cornelius Schwarz*

Funding institution: German Research Foundation (DFG)

**Towards the neural basis of joint attention II**

(TH 425/12-2)

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

Funding institution: German Research Foundation (DFG)

**Erfüllung der Aufgaben der Abt. Kognitive Neurologie**

(T0013/29010/2016/kg)

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

Funding institution: Hermann and Lilly Schilling  
Foundation

## Awards

**Prof. Dr. Martin Giese**

GTC Teaching Award

**Leonid Fedorov**

Best Paper Award,

IJCCI Conference on Computational Intelligence 2016

## Conferences & Workshops

**9th Primate Neurobiology Conference**

Tübingen, 15.-16.03.2016

*Scientific Coordinator: Prof. Dr. Hans-Peter Thier*

**Satellite Workshop BCCN Meeting: Friction – boon or bane  
for tactile coding?**

Berlin, 20.-24.09.2016

*Scientific Coordinator: Prof. Dr. Cornelius Schwarz*

**Fall School: Facets of Aging**

Tübingen, 05.12.2016

*Scientific Coordinator: PD Dr. Axel Lindner*

## Appointments

**Prof. Dr. Fahad Sultan**

Associate Professor, Universität Umea, Sweden

*Accepted*

## PhD Theses

(Completed in 2016)

Dongyun Li

**Spatial neglect: spatial coordinates, temporal dynamics and anatomical correlates**

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

## MD Theses

(Completed in 2016)

Anna Margareta Friemann

**Do cerebellar Purkinje cells have gain fields?**

*Supervisor: Prof. Dr. Hans-Peter Thier*

Dongyun Li

**Trunk rotation affects temporal order judgments**

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

Evgeny Sheygal

**Einfluss der Objekterkennung auf die neuronalen Prozesse der Steuerung von Greifbewegungen**

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

## Master Theses

(Completed in 2016)

Mareike Gann

**Know it or get it! The neural basis of mechanical reasoning and semantic knowledge about tools**

*Supervisor: Dr. Marc Himmelbach*

Sophie Laturnus

**Finding the culprit – investigating the reasons for the spike triggered mixture model's failing on trigeminal nucleus data in the rat**

*Supervisor: Prof. Dr. Cornelius Schwarz*

Silvia de Maglie

**How does paresis affect the formation of finger grip during prehension movements**

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

Florian Ott

**Neural mechanisms underlying the attribution of agency to sensorimotor error**

*Supervisor: PD Dr. Axel Lindner*

## Bachelor Theses

(Completed in 2016)

Jonas Fink

**Dynamik der Pupillenreaktion**

*Supervisor: Prof. Dr. Uwe Ilg*

Jamal-Jameel Kaschin

**Zahlensinn: Punkte und arabische Ziffern**

*Supervisor: Prof. Dr. Uwe Ilg*



# Department of Cellular Neurology



## Clinical and Scientific Staff

### HEAD OF THE DEPARTMENT

Prof. Dr. Mathias Jucker

### HUMBOLDT GUEST PROFESSOR

Prof. Dr. Lary C. Walker

### GROUP LEADERS

Dr. Frank Baumann (until 05/2016)  
Prof. Dr. Christoph Laske (Section of Dementia Research,  
jointly with the University Department of Psychiatry  
and Psychotherapy)  
Dr. Jonas Neher

### SCIENTISTS/RESIDENTS

Mehtap Bacioglu  
Melanie Barth (since 11/2016)  
Natalie Beschorner (since 03/2016)  
Karoline Degenhardt  
Timo Eninger  
Dr. Petra Fuger  
Lisa Hasler  
Stephan Kaser  
Dr. Jasmin Mahler (until 08/2016)  
Dr. Sonia Mazzitelli  
Dr. Jorg Odenthal  
Jay Rasmussen  
Juliane Schelle  
Manuel Schweighauser (until 11/2016)  
Dr. Angelos Skodras  
Dr. Matthias Staufenbiel  
Dr. Bettina Wegenast-Braun  
Ann-Christin Wendeln  
Dr. Renata Werner (until 07/2016)  
Dr. Lan Ye (until 07/2016)

## TECHNICAL STAFF/ ADMINISTRATION

Anika Bühler  
Simone Eberle  
Bernadette Graus  
Marius Lambert (until 04/2016)  
Maren Lösch (since 06/2016)  
Ulrike Obermüller  
Claudia Resch (until 08/2016)  
Katleen Wild (since 02/2016)

## MASTER STUDENTS

Ruth Dröge  
Jessica Wagner

## 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. Mihovil Mladinov, Christian Mychajliw, Petra Hinderer*

### **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, Gertrud Schneider-Nyakotei, 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 Vukovic, Gertrud Schneider-Nyakotei*

### **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

#### Promotionsstipendium

*Project leader: Ann-Christin Wendeln*

Funding institution: Studienstiftung des deutschen Volkes

#### Donation for Alzheimer's biomarker research

*Project leader: Prof. Dr. Mathias Jucker*

Funding institution: Anonymous donor

#### Characterization of early proteopathic 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)

#### 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

### NEW GRANTS

#### JPND - REfrAME: Pathway complexities of protein misfolding in neurodegenerative diseases: a novel approach to risks evaluation and model development (01ED1607)

*Project leader: Prof. Dr. Mathias Jucker*

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

#### Verbundprojekt Sonderlinie Medizin Nr. 2440-0-0: Neuroinflammation bei der Neurodegeneration

*Project leader: Prof. Dr. Mathias Jucker*

Funding institution: Ministerium für Wissenschaft, Forschung und Kunst, Baden-Württemberg

#### Mechanisms of Neuronal Dysfunction and Death in Sepsis-induced Cognitive Impairment (NE 1951/4-1)

*Project leader: Dr. Jonas Neher*

Funding institution: Deutsche Forschungsgemeinschaft (DFG)



## PhD Theses

(Completed in 2016)

Renata Werner

**Modeling the prion aspect of cerebral  $\alpha$ -amyloidosis in organotypic slice cultures and mice**

*Supervisor: Prof. Dr. Mathias Jucker*

Jasmin Mahler

**Hidden variations of Alzheimer's pathology: Insight into the amyloid diversity using conformation-sensitive dyes**

*Supervisor: Prof. Dr. Mathias Jucker*

## Master Theses

(Completed in 2016)

Ruth Dröge

**Analysis of mice overexpressing murine A $\beta$ : A new tool to study cerebral  $\beta$ -amyloidosis**

*Supervisor: Mathias Jucker, Jonas Neher*

Jessica Wagner

**The impact of MFG-E8 on Alzheimer's disease pathology**

*Supervisor: Jonas Neher, Mathias Jucker*

## Awards

**Prof. Dr. Lary C. Walker**

Alexander von Humboldt Foundation Research Award to join the Department of Cellular Neurology  
*Nominated by Prof. Dr. Mathias Jucker*

## Conferences & Workshops

**1st DIAN Family Meeting in Germany**

Würzburg, 01.-02.07.2016

*Coordinator: Prof. Dr. Mathias Jucker*

## Guest Researcher

**Prof. Dr. Lary C. Walker**, Atlanta, USA

*Host: Prof. Dr. Mathias Jucker*



## Independent Research Groups

# Neuroregeneration and Repair

## Clinical and Scientific Staff

### HEAD OF THE RESEARCH GROUP

Prof. Dr. Simone Di Giovanni, MD, PhD

### SCIENTISTS/RESIDENTS

Francesco De Virgiliis  
Vasileois Kampanis (until 08/2016)  
Guiping Kong  
Radhika Puttagunta (until 03/2016)  
Luming Zhou

## Third-Party Funding

### ONGOING GRANTS

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

*Project leader:*

*Prof. Dr. Simone Di Giovanni, MD, PhD*

Funding institution: German Research Foundation (DFG)

# Physiology of Learning and Memory

## Clinical and Scientific Staff

### HEAD OF THE RESEARCH GROUP

Dr. Ingrid Ehrlich

### SCIENTISTS/RESIDENTS

Dr. Ayla Aksoy-Aksel  
Dr. Irene Melo

### TECHNICAL STAFF/ADMINISTRATION

Andrea Gall

### PHD DOCTORAL STUDENTS

Stephanie Knapp (until 9/2016)

### MASTER STUDENTS

Sebastian Samer (until 10/2016, jointly with Schulze-Hentrich, Medical Genetics)  
Tamara Vasilkovska (from 04/2016)

### INTERNSHIPS

Sebastian Samer  
(Supervisor: Dr. Ingrid Ehrlich)

Antonia Lenders  
(Supervisors: Dr. Ingrid Ehrlich, Dr. Irene Melo)

## Third-Party Funding

### ONGOING GRANTS

#### **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)

#### **Plasticity of intercalated cell microcircuits in fear learning**

Project leader: Dr. Ingrid Ehrlich  
Funding institution: German Research Foundation (DFG) (EH197/3-1)

## Awards

**Dr. Douglas Asede** (PhD Student until 2015)  
„Paper of the Year“ Award for a paper published in 2015, Hertie Institut und Gemeinnützige Hertiestiftung

**Dr. Ingrid Ehrlich**  
Teaching Award, Graduate School of Molecular and Cellular Neuroscience, 2016



**Publications  
and Student  
Training  
in 2016**

# List of Publications in 2016

(In alphabetical order)

## Peer Reviewed Articles

- Abbasi A, Vieira RD, **Bischof F**, Walter M, Movassaghi M, Berchtold NC, Niess AM, Cotman CW, Northoff H (2016) Sex-specific variation in signaling pathways and gene expression patterns in human leukocytes in response to endotoxin and exercise. *Journal of Neuroinflammation* 13: 289
- Altmann J, Büchner B, Nadaj-Pakleza A, Schäfer J, Jackson S, Lehmann D, Deschauer M, Kopajtich R, Lautenschläger R, Kuhn KA, Karle K, **Schöls L**, Schulz JB, Weis J, Prokisch H, Kornblum C, Claeys KG, Klopstock T (2016) Expanded phenotypic spectrum of the m.8344A>G “MERRF” mutation: data from the German mitoNET registry. *Journal of Neurology* 263: 961-72
- Andlauer TF, Buck D, Antony G, Bayas A, Bechmann L, Berthele A, Chan A, Gasperi C, Gold R, Graetz C, Haas J, Hecker M, Infante-Duarte C, Knop M, Kumpfel T, Limmroth V, Linker RA, Loleit V, Luessi F, Meuth SG, Muhlau M, Nischwitz S, Paul F, Putz M, Ruck T, Salmen A, Stangel M, Stellmann JP, Sturmer KH, Tackenberg B, Then Bergh F, Tumani H, Warnke C, Weber F, Wiendl H, Wildemann B, Zettl UK, **Ziemann U**, Zipp F, Arloth J, Weber P, Radivojkov-Bлагоjevic M, Scheinhardt MO, Dankowski T, Bettecken T, Lichtner P, Czamara D, Carrillo-Roa T, Binder EB, Berger K, Bertram L, Franke A, Gieger C, Herms S, Homuth G, Ising M, Jockel KH, Kacprowski T, Kloiber S, Laudes M, Lieb W, Lill CM, Lucae S, Meitinger T, Moebus S, Muller-Nurasyid M, Nothen MM, Petersmann A, Rawal R, Schminke U, Strauch K, Volzke H, Waldenberger M, Wellmann J, Porcu E, Mulas A, Pitzalis M, Sidore C, Zara I, Cucca F, Zoledziewska M, Ziegler A, Hemmer B, Muller-Myhsok B (2016) Novel multiple sclerosis susceptibility loci implicated in epigenetic regulation. *Science Advances* 2: e1501678
- Arnold DL, Fisher E, Brinar VV, Cohen JA, Coles AJ, Giovannoni G, Hartung HP, Havrdova E, Selmaj KW, Stojanovic M, Weiner HL, Lake SL, Margolin DH, Thomas DR, Panzara MA, Compston DAS, **Investigators C-MSI and C-MSII (Ziemann U)** (2016) Superior MRI outcomes with alemtuzumab compared with subcutaneous interferon beta-1a in MS. *Neurology* 87: 1464-72
- Athanasopoulou IM, Rasenack M, Grimm C, Axer H, Sinnreich M, Decard BF, **Grimm A** (2016) Ultrasound of the nerves - An appropriate addition to nerve conduction studies to differentiate paraproteinemic neuropathies. *Journal of the Neurological Sciences* 362: 188-95
- Axer H, **Grimm A**, Pausch C, Teschner U, Zinke J, Eisenach S, Beck S, Guntinas-Lichius O, Brunkhorst FM, Witte OW (2016) The impairment of small nerve fibers in severe sepsis and septic shock. *Critical Care* 20: 64
- Ayzenberg I, Schollhammer J, Hoepner R, Hellwig K, Ringelstein M, Aktas O, Kumpfel T, **Krumbholz M**, Trebst C, Paul F, Pache F, Obermann M, **Zeltner L**, Schwab M, Berthele A, Jarius S, Kleiter I, **Neuromyelitis Opt Study Grp (Ziemann U)** (2016) Efficacy of glatiramer acetate in neuromyelitis optica spectrum disorder: a multicenter retrospective study. *Journal of Neurology* 263: 575-82
- Bacioglu M, Maia LF, Preische O, Schelle J, Apel A, Kaeser SA, Schweighauser M, Eninger T, Lambert M**, Pilotto A, Shimshek DR, Neumann U, **Kahle PJ, Staufenbiel M**, Neumann M, **Maetzler W**, Kuhle J, **Jucker M** (2016) Neurofilament Light Chain in Blood and CSF as Marker of Disease Progression in Mouse Models and in Neurodegenerative Diseases. *Neuron* 91: 56-66
- Baden P, **Deleidi M** (2016) Mitochondrial Antigen Presentation: A Vacuolar Path to Autoimmunity in Parkinson's Disease. *Trends in Immunology* 37: 719-21
- Bauer S, Baier H, Baumgartner C, Bohlmann K, Fauser S, Graf W, Hillenbrand B, Hirsch M, Last C, **Lerche H**, Mayer T, Schulze-Bonhage A, Steinhoff BJ, **Weber Y**, Hartlep A, Rosenow F, Hamer HM (2016) Transcutaneous Vagus Nerve Stimulation (tVNS) for Treatment of Drug-Resistant Epilepsy: A Randomized, Double-Blind Clinical Trial (cMPsE02). *Brain Stimulation* 9: 356-63
- Belardinelli A, **Barabas M, Himmelbach M**, Butz MV (2016) Anticipatory eye fixations reveal tool knowledge for tool interaction. *Experimental Brain Research* 234: 2415-31
- Berg D**, Postuma RB (2016) Diagnosis of Parkinson's disease: Imaging and genetics. *Movement Disorders* 31: 431-2

- Bernhard FP, Heinzel S, Binder G, Weber K, **Apel A, Roeben B, Deuschle C**, Maechtel M, Heger T, Nussbaum S, **Gasser T, Maetzler W, Berg D** (2016) Insulin-Like Growth Factor 1 (IGF-1) in Parkinson's Disease: Potential as Trait-, Progression- and Prediction Marker and Confounding Factors. *PLoS ONE* 11: e0150552
- Bisdas S, Chadzynski GL, Braun C, Schittenhelm J, Skardelly M, Hagberg GE, Ethofer T, Pohmann R, Shajan G, Engelmann J, **Tabatabai G, Ziemann U**, Ernemann U, Scheffler K (2016) MR spectroscopy for in vivo assessment of the oncometabolite 2-hydroxyglutarate and its effects on cellular metabolism in human brain gliomas at 9.4T. *Journal of Magnetic Resonance Imaging* 44: 823-33
- Blauwendraat C, Francescato M, Gibbs JR, Jansen IE, **Simón-Sánchez J**, Hernandez DG, Dillman AA, Singleton AB, Cookson MR, Rizzu P, **Heutink P** (2016) Comprehensive promoter level expression quantitative trait loci analysis of the human frontal lobe. *Genome Medicine* 8: 65
- Blauwendraat C, Wilke C, Jansen I, Rizzu P, **Simon-Sanchez J, Heutink P, Synofzik M** (2016) The genetic landscape of clinical FTD: a systematic whole-exome sequencing study of 125 consecutive cases. *Journal of Neurochemistry* 138: 312-12
- Blauwendraat C, Wilke C, Jansen IE, **Schulte C, Simón-Sánchez J**, Metzger FG, Bender B, **Gasser T, Maetzler W**, Rizzu P, **Heutink P, Synofzik M** (2016) Pilot whole-exome sequencing of a German early-onset Alzheimer's disease cohort reveals a substantial frequency of PSEN2 variants. *Neurobiology of Aging* 37: 208.e11-7
- Bloechle J, Huber S, Bahnmueller J, **Rennig J**, Willmes K, Cavdaroglu S, Moeller K, Klein E (2016) Fact Learning in Complex Arithmetic-The Role of the Angular Gyrus Revisited. *Human Brain Mapping* 37: 3061-79
- Blum D, Reimold M, **Maetzler W**, la Fougere C, Reischl G, **Berg D, Liepelt-Scarfone I** (2016) Staging of cognitive impairment: Validation of a novel cognitive score with [F-18]FDG-PET. *Movement Disorders* 31: S470-S72
- Bonifert T, Gonzalez Menendez I, Battke F, Theurer Y, **Synofzik M, Schöls L**, Wissinger B (2016) Antisense Oligonucleotide Mediated Splice Correction of a Deep Intronic Mutation in OPA1. *Molecular Therapy Nucleic Acids* 5: e390
- Bosch D, Asede D, Ehrlich I** (2016) Ex Vivo Optogenetic Dissection of Fear Circuits in Brain Slices. *Journal of Visualized Experiments* 110: e53628
- Breu AK, Hauser TK, Ebner FH, **Bischof F**, Ernemann U, Seeger A (2016) Morphologic and Clinical Outcome of Intracranial Aneurysms after Treatment Using Flow Diverter Devices: Mid-Term Follow-Up. *Radiology Research and Practice*, 10.1155/2016/2187275
- Brockmann K, Apel A, Schulte C**, Schneiderhan-Marra N, Pont-Sunyer C, Vilas D, Ruiz-Martinez J, Langkamp M, Corvol JC, Cormier F, Knorpp T, Joos TO, **Gasser T**, Schüle B, Aasly JO, Foroud T, Marti-Masso JF, Brice A, Tolosa E, Marras C, **Berg D, Maetzler W** (2016) Inflammatory profile in LRRK2-associated prodromal and clinical PD. *Journal of Neuroinflammation* 13: 122
- Brockmann K, Schulte C**, Schneiderhan-Marra N, **Apel A**, Pont-Sunyer C, Vilas D, Ruiz-Martinez J, Langkamp M, Corvol JC, Cormier F, Knorpp T, Joos TO, Bernhard A, **Gasser T**, Marras C, Schule B, Aasly JO, Foroud T, Marti-Masso JF, Brice A, Tolosa E, **Berg D, Maetzler W** (2016) Inflammatory profile discriminates clinical subtypes in LRRK2-associated PD. *Movement Disorders* 31: S204-S04
- Busche MA, **Staufenbiel M**, Willem M, Haass C, Forstl H (2016) [Mechanisms of Alzheimer's disease : Neuronal hyperactivity and hypoactivity as new therapeutic targets]. *Nervenarzt*, 10.1007/s00115-015-0041-5
- Caggiano V, Fleischer F, Pomper JK, Giese MA, Thier P** (2016) Mirror Neurons in Monkey Premotor Area F5 Show Tuning for Critical Features of Visual Causality Perception. *Current Biology* 26: 3077-82
- Cash RFH, Murakami T, Chen R, Thickbroom GW, **Ziemann U** (2016) Augmenting Plasticity Induction in Human Motor Cortex by Disinhibition Stimulation. *Cerebral Cortex* 26: 58-69

- Corbett MA, Bellows ST, Li M, Carroll R, Micallef S, Carvill GL, Myers CT, Howell KB, **Maljevic S, Lerche H**, Gazina EV, Mefford HC, Bahlo M, Berkovic SF, Petrou S, Scheffer IE, Gecz J (2016) Dominant KCNA2 mutation causes episodic ataxia and pharmacoresponsive epilepsy. *Neurology* 87: 1975-84
- Cornelsen S, Rennig J, Himmelbach M** (2016) Memory-guided reaching in a patient with visual hemianopia. *Cortex* 79: 32-41
- Dams J, Balzer-Geldsetzer M, Siebert U, Deuschl G, Schuepbach WM, Krack P, Timmermann L, Schnitzler A, Reese JP, Dodel R, investigators E, Schuepbach WM, Rau J, Knudsen K, Volkmann J, Krack P, Timmermann L, Hälbig TD, Hesekamp H, Navarro SM, Meier N, Falk D, Mehdorn M, Paschen S, Maarouf M, Barbe MT, Fink GR, Kupsch A, Gruber D, Schneider GH, Seigneuret E, Kistner A, Chaynes P, Ory-Magne F, Brefel Courbon C, Vesper J, Schnitzler A, Wojtecki L, Houeto JL, Bataille B, Maltête D, Damier P, Raoul S, Sixel-Doering F, Hellwig D, Gharabaghi A, **Krüger R**, Pinsker MO, Amstage F, Régis JM, Witjas T, Thobois S, Mertens P, Kloss M, Hartmann A, Oertel WH, Post B, Speelman H, Agid Y, Schade-Brittinger C, Deuschl G (2016) Cost-effectiveness of neurostimulation in Parkinson's disease with early motor complications. *Movement Disorders* 31: 1183-91
- Darmani G, Zipser CM**, Bohmer GM, Deschet K, **Muller-Dahlhaus F, Belardinelli P**, Schwab M, **Ziemann U** (2016) Effects of the Selective alpha 5-GABAAR Antagonist S44819 on Excitability in the Human Brain: A TMS-EMG and TMS-EEG Phase I Study. *Journal of Neuroscience* 36: 12312-20
- Dayan E, Sella I, **Mukovskiy A**, Douek Y, **Giese MA**, Malach R, Flash T (2016) The Default Mode Network Differentiates Biological From Non-Biological Motion. *Cerebral Cortex* 26: 234-45
- de Vries B, Anttila V, **Freilinger T**, Wessman M, Kaunisto MA, Kallela M, Artto V, Vijfhuizen LS, Gobel H, Dichgans M, Kubisch C, Ferrari MD, Palotie A, Terwindt GM, van den Maagdenberg A, Int Headache Genetics C (2016) Systematic re-evaluation of genes from candidate gene association studies in migraine using a large genome-wide association data set. *Cephalalgia* 36: 604-14
- Dhayade S, Kaesler S, Sinnberg T, Dobrowinski H, Peters S, **Naumann U**, Liu H, Hunger RE, Thunemann M, Biedermann T, Schitteck B, Simon HU, Feil S, Feil R (2016) Sildenafil Potentiates a cGMP-Dependent Pathway to Promote Melanoma Growth. *Cell Reports* 14: 2599-610
- Dhingra A, Pyz E, **Simon-Sanchez J**, Castillo-Lizardo M, Theurer Y, **Schols L**, Timmann-Braun D, Prudlo J, **Synofzik M**, Rizzu P, **Heutink P** (2016) CAGE expression profiling of the human iPSC-derived neurons carrying mutations in the C9orf72. *Journal of Neurochemistry* 138: 414-14
- Dick KM, Boeve BF, Borroni B, Boxer A, Brice A, Butler CR, Couratier P, Dickerson BC, DuCharme S, Finger E, Galimberti D, Gerhard A, Ghoshal N, Graff C, Grossman M, Hodges JR, Huey ED, Laforce R, Le Ber I, Levin J, Mackenzie R, Masellis M, Martinaud O, Mendonca A, Moreno F, Nicholas M, Onyike CU, Otto M, Roberson ED, Rogalski E, Rosen HJ, Rowe JB, Sanchez-Valle R, Santana I, Sorbi S, van Swieten J, **Synofzik M**, Tagliavini F, Vandenberghe R, Roher JD (2016) Symptom onset in genetic frontotemporal dementia. *Journal of Neurochemistry* 138: 232-33
- Droby A, Yuen KSL, Muthuraman M, Reitz SC, Fleischer V, Klein J, Gracien RM, **Ziemann U**, Deichmann R, Zipp F, Groppa S (2016) Changes in brain functional connectivity patterns are driven by an individual lesion in MS: a resting-state fMRI study. *Brain Imaging and Behavior* 10: 1117-26
- Ebrahimi A, Skardelly M, Bonzheim I, Ott I, Muhleisen H, Eckert F, **Tabatabai G**, Schittenhelm J (2016) ATRX immunostaining predicts IDH and H3F3A status in gliomas. *Acta Neuropathologica Communications* 4: 60
- Eising E, de Leeuw C, Min JL, Anttila V, Verheijen MHG, Terwindt GM, Dichgans M, **Freilinger T**, Kubisch C, Ferrari MD, Smit AB, de Vries B, Palotie A, van den Maagdenberg A, Posthuma D, Int Headache Genetics C (2016) Involvement of astrocyte and oligodendrocyte gene sets in migraine. *Cephalalgia* 36: 640-47

- Eising E, Huisman SMH, Mahfouz A, Vijfhuizen LS, Anttila V, Winsvold BS, Kurth T, Ikram MA, **Freilinger T**, Kaprio J, Boomsma DI, van Duijn CM, Jarvelin MRR, Zwart JA, Quaye L, Strachan DP, Kubisch C, Dichgans M, Smith GD, Stefansson K, Palotie A, Chasman DI, Ferrari MD, Terwindt GM, de Vries B, Nyholt DR, Lelieveldt BPF, van den Maagdenberg A, Reinders MJT (2016) Gene co-expression analysis identifies brain regions and cell types involved in migraine pathophysiology: a GWAS-based study using the Allen Human Brain Atlas. *Human Genetics* 135: 425-39
- El Achkar CM, Kelly M, Niturad C, **Maljevic SL**, Barisic N, Koziel B, Shinawi M, Vineyard M, Willing M, Robin N, Hurst A, Dobyns W, Golden-Grant K, Schimmenti L, Srivastava S, Johnston M, Fatemi A, McKnight D, Sheidley BR, Poduri A, Yang E, Lerche H, Olson H (2016) Characterization of the GABRB2 Variant Associated Epilepsy and Neurodevelopmental Disorder. *Annals of Neurology* 80: S314-S15
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# List of Student Training in 2016

(In alphabetical order)

## Lectures

(Summer Term/Winter Term)

### Basic Neurobiology

*Prof. Dr. Philipp Kahle (coordinator), Dr. Jonas Neher, Dr. Henner Koch, Dr. Sven Geisler, Dr. Ingrid Ehrlich, Dr. Daniel Weiss*

Curriculum Molecular Medicine

### Behavior and Cognition: Neuropsychology

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

Graduate Training Centre of Neuroscience

### Biochemistry II for Medical Students

*Prof. Dr. Philipp Kahle*

Faculty of Science (Biochemistry)

### 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

### Fundamentals of Sensorimotor Integration

*Prof. Dr. Uwe Ilg*

Graduate Training Centre of Neuroscience

### Genetic and Molecular Basis of Neural Diseases I

*Prof. Dr. Mathias Jucker, Prof. Dr. Thomas Gasser, Prof. Dr. Ludger Schöls, Prof. Dr. Manuela Neumann*

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. Henner Koch*

Graduate Training Centre of Neuroscience

### Introduction to Clinical Neurology

*PD Dr. Tobias Freilinger, Dr. Daniel Weiss,*

*Dr. Markus Krumbholz*

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. Henner Koch*

Graduate Training Centre of Neuroscience

### Machine Learning II

*Prof. Dr. Martin Giese, Dr. Tjeerd Dijkstra*

Graduate Training Centre of Neuroscience

### Methods in Neuropsychology

*Dr. Marc Himmelbach, Dr. Bianca de Haan*

Graduate Training Centre of Neuroscience

**MolMed – Grundlagen der Neurobiologie**

*Prof. Dr. Philipp Kahle (coordinator), Dr. Jonas Neher,  
Dr. Henner Koch, Dr. Frank Baumann, Dr. Sven Geisler,  
Dr. Ingrid Ehrlich, Dr. Daniel Weiss*  
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**

*Prof. Dr. Cornelius Schwarz*  
Graduate Training Centre of Neuroscience

**Neural Motor Control**

*Dr. Winfried Ilg*  
Graduate Training Centre of Neuroscience

**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)**

*PD Dr. Matthias Synofzik, 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**

*Dr. Rebecca Schüle, 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

**Ultraschall in der Neurologie**

*PD Dr. Alexander Grimm*  
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)

### **Beyond Broca and Wernicke – Update of the Language Network**

*Prof. 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, Dr. Rebecca Schüle, PD Dr. Matthias Synofzik*  
Medical Faculty

### **Bedside Training: Neurological Diagnostics**

*Prof. Dr. Yvonne Weber, , Gabriela Zaiser, Nathalie Vetter, Yvonne Schütze, PD Dr. Alexander Grimm, Dr. Benjamin Röben, Dr. Tobias Lindig*  
Medical Faculty

### **Bedside Training: Neurology and Epileptology**

*Prof. Dr. Yvonne Weber, Prof. Dr. Yvonne Weber, Dr. Sabine Rona, Prof. Dr. Holger Lerche, PD Dr. Niels Focke, Monika Fudali, Dr. Josua Kegele*  
Medical Faculty

### **Chronic Pain Syndromes – Bedside Teaching (QB14)**

*PD Dr. Tobias Freilinger*  
Medical Faculty

### **Current Topics and Methods in Neurophysiology**

*Dr. Ingrid Ehrlich, Dr. Ulrike Hedrich, Dr. Henner Koch*  
Medical Faculty

### **Current Problems in Neuropsychology**

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

### **Dynamics of Neural Systems (exercises)**

*Prof. Dr. Martin Giese, Albert Mukovskiy, Mohammad Hovaidi Ardestani*  
Graduate Training Centre of Neuroscience

### **Early Diagnosis of Neurodegenerative Diseases**

*Prof. Dr. Daniela Berg, PD Dr. Inga Liepelt-Scarfone*  
Medical Faculty

### **Fall School: Facets of Aging**

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

### **From Monologue to Dialogue – Turn taking and speakers in interaction**

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

### **Geriatric-neurological-psychiatric Case Conference**

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

### **Graduate Training Centre of Neuroscience Journal Club**

*Prof. Dr. Ulrike Naumann*  
Graduate Training Centre of Neuroscience

### **Hertie Lunch Seminar**

*Prof. Dr. Uwe Ilg*  
Medical Faculty

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

*Prof. Dr. Dr. Ghazaleh Tabatabai*  
Medical Faculty, Graduate Training Centre of Neuroscience

### **IPSC Journal Club**

*Dr. Snezana Maljevic*  
Medical Faculty

### **Lab Practicals Neurophysiology**

*Prof. Dr. Cornelius Schwarz*  
Graduate Training Centre of Neuroscience

**Machine Learning II** (exercises)

*Prof. Dr. Martin Giese, Dr. Tjeerd Dijkstra*  
Graduate Training Centre of Neuroscience

**Methodological Frontiers in the Cognitive Neurosciences**

*Dr. Marc Himmelbach et al.*  
Graduate Training Centre of Neuroscience

**Molecular Neurooncology**

*Prof. Dr. Ulrike Naumann*  
Medical Faculty

**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**

*PD Dr. Matthis Synofzik, PD Dr. Tobias Freilinger*  
Medical Faculty

**Neurological Seminar**

*Prof. Dr. Ludger Schöls, PD Dr. Daniel Weiss,  
Dr. Rebecca Schüle, PD Dr. Matthis Synofzik,  
Prof. Dr. Daniela Berg, Prof. Dr. Walter Maetzler,  
PD Dr. Niels Focke, PD Dr. Tobias Freilinger,  
Dr. Florian Müller-Dahlhaus, Dr. Markus Krumbholz,  
Dr. Sven Poli, Prof. Dr. Dr. Ghazaleh Tabatabai*  
Medical Faculty

**Neuropathological Case Meeting**

*Prof. Dr. Manuela Neumann (Dept. of Neuropathology, UKT)*  
Medical Faculty

**Neurophysiology Seminars and De-Briefing of Practical Course**

*Dr. Ingrid Ehrlich, Dr. Ulrike Hedrich*  
(coordinator: *Prof. Dr. Olga Garaschuk*)  
Medical Faculty

**Neuropsychology of Dementia**

*PD Dr. Inga Liepelt-Scarfone*  
Department of Psychology (Faculty of Science)

**Oncolytic Viruses as Cancer Therapeutic Drugs**

*Prof. Dr. Ulrike Naumann*  
Medical Faculty

**Practical Neurobiology**

*PD Dr. Axel Lindner*  
Faculty of Science (Biology)

**Scientific Colloquium Neurology (“Wednesday Colloquium”)**

*PD Dr. Matthis Synofzik, Prof. Dr. Walter Maetzler,  
Prof. Dr. Daniela Berg*  
Medical Faculty

**Scientific Misconduct, Responsible Conduct and the Shades of Grey in Between**

*Dr. Marc Himmelbach et al.*  
Graduate Training Centre of Neuroscience

**Seminar in Medical Psychology**

**„Missed it again! Attention and its deficits“**  
*Dr. Bianca de Haan*  
Medical Faculty

**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

**The Role of EMT Proteins in Human Brain Vascular Pericytes**

*Prof. Dr. Ulrike Naumann, Jakob Ehlers*  
HIH Lunch Seminar, Medical Faculty

**Therapy Seminar of the Neurological Clinic**

*Prof. Dr. Holger Lerche, Prof. Dr. Ulf Ziemann,  
Prof. Dr. Thomas Gasser, PD Matthis Synofzik,  
Prof. Dr. Hans-Peter Thier*  
Medical Faculty

## IMPRINT

### Published by

The Center of Neurology  
University Hospital of Neurology  
Hoppe-Seyler-Straße 3  
and  
Hertie Institute for Clinical Brain Research  
Otfried-Müller-Straße 27  
D-72076 Tübingen

### Coordination

Prof. Dr. Thomas Gasser and Dr. Astrid Proksch

### Editing & Setting

Simone Eberle, [healthytranslations.com](http://healthytranslations.com)

### Printed by

Druckerei Maier GmbH, Rottenburg am Neckar

### Concept & Design

Carolin Rankin, Rankin Identity

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