

# Annual Report 2014







CENTER OF NEUROLOGY TÜBINGEN

# Annual Report 2014

## 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



# Content

# Contents

<b>THE CENTER OF NEUROLOGY TÜBINGEN IN 2014</b> Das Zentrum für Neurologie in 2014	<b>6</b>
<b>UNIVERSITY HOSPITAL OF NEUROLOGY</b> Neurologische Klinik des Universitätsklinikums Tübingen	<b>8</b>
<b>THE HERTIE-INSTITUTE FOR CLINICAL BRAIN RESEARCH (HIH)</b> Hertie-Institut für klinische Hirnforschung (HIH)	<b>10</b>
<b>UNIVERSITY HOSPITAL OF NEUROLOGY</b>	<b>14</b>
<b>DEPARTMENT OF NEUROLOGY AND STROKE</b>	<b>16</b>
<b>DEPARTMENT OF NEUROLOGY AND EPILEPTOLOGY</b>	<b>26</b>
<b>DEPARTMENT OF NEURODEGENERATIVE DISEASES</b>	<b>32</b>
<b>DEPARTMENT OF COGNITIVE NEUROLOGY</b>	<b>44</b>
<b>DEPARTMENT OF CELLULAR NEUROLOGY</b>	<b>52</b>
<b>INDEPENDENT RESEARCH GROUPS</b>	<b>56</b>
<b>PUBLICATIONS IN 2014</b>	<b>60</b>

# The Center of Neurology in 2014

**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 the study of the human brain and its disorders.**

The Center for Neurology presently consists of five departments, focussing on a variety of important areas of basic and clinical brain research and patient care, including and Stroke, Epilepsy, 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.

*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.*

*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.*

*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*

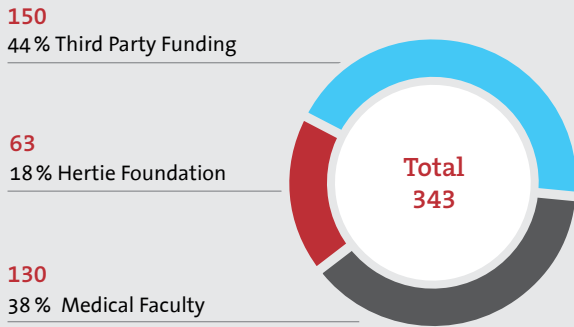
*Die besonders enge Verknüpfung von Klinik und Grundlagenforschung ist ein fundamentaler Aspekt des Hertie-Konzepts und ein Alleinstellungsmerkmal gegenüber anderen Institutionen der Hirnforschung. Dies ist unter anderem die Grundlage für erfolgreiche klinische Studien, die am Zentrum zum Beispiel in der Therapie der Parkinson-Krankheit, der Epilepsien, der Multiplen Sklerose, von Schlaganfällen und auch in der Hirntumorbehandlung in erheblichem Umfang durchgeführt werden.*



# Facts & Figures

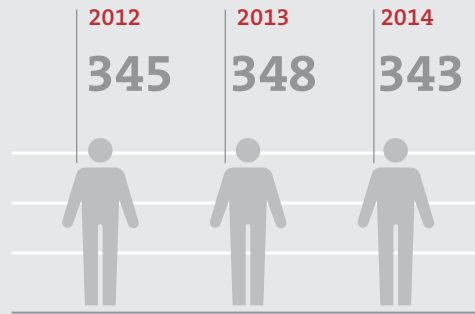
## NUMBER OF STAFF IN 2014

Center of Neurology without nursing services (by headcount)



## DEVELOPMENT OF STAFF

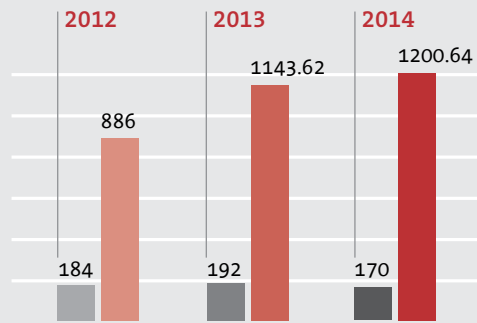
Center of Neurology (by headcount)



## NUMBER OF PUBLICATIONS

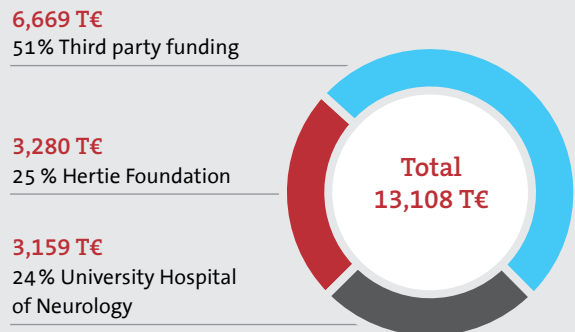
### IMPACT FACTORS

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



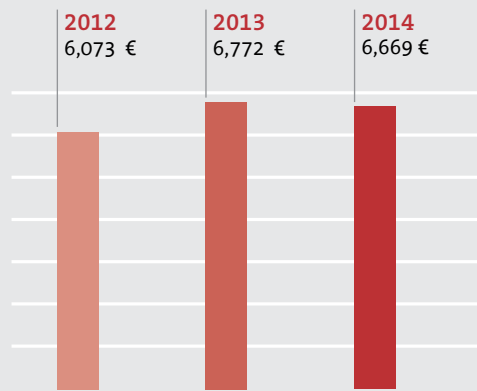
## TOTAL FUNDINGS IN 2014

Center of Neurology



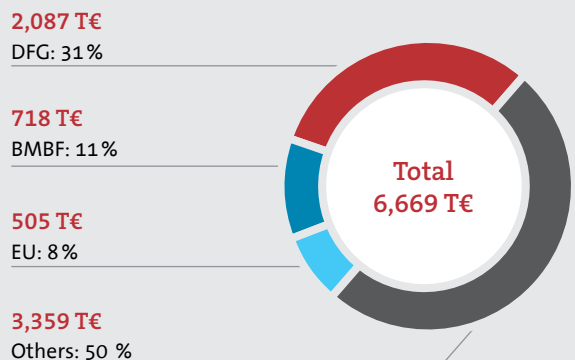
## THIRD PARTY FUNDING

Center of Neurology (T€)



## THIRD PARTY FUNDING IN 2014

Center of Neurology





## University Hospital of Neurology

### CLINICAL CARE

The University Hospital's Clinical Neurology Department treats inpatients with the complete spectrum of neurologic diseases on four general wards. Patients with acute strokes are treated on a specialized stroke-unit which allows 24-hour surveillance and treatment. In addition, a specialized EEG-monitoring unit allows continuous long-term EEG recordings for patients with intractable epilepsies.

In the outpatient unit of the department, more than 12,144 (including diagnostic procedures) patients are examined and treated per year, many of them in specialty clinics which are directed by recognized specialists in the respective fields.

### PATIENTENVERSORGUNG

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

*In der neurologischen Poliklinik werden 12.144 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 4,735 patients in 2014.

**NUMBER OF ADMISSIONS**

**4,735**

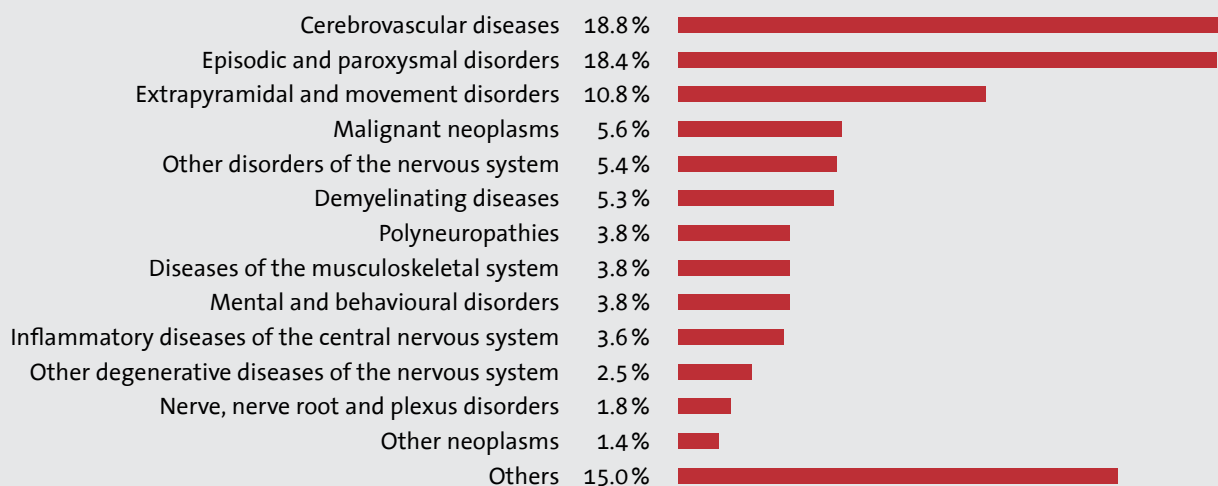
**LENGTH OF STAY (IN DAYS)**

**5,1**

**CASE-MIX-INDEX**

**1,48**

### INPATIENT DIAGNOSIS GROUPS



### OUTPATIENT CARE

**NUMBER OF CONSULTATIONS**

(including diagnostic procedures)

**12,144**



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



**Hertie-Institut**  
für klinische Hirnforschung

**Since its founding 13 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: the departments of Neurology and Stroke, Epileptology, and Neurodegenerative Disorders treat outpatient in specialty clinics, but also inpatient with the whole spectrum of neurological diseases, while the Departments of Cognitive Neurology and Cellular Neurology provide specialized diagnostic services and care in an out-patient setting only, focusing on neurocognitive impairments and Alzheimer's disease, respectively.

The institute is home to a total of 18 professors, 350 members and 34 research groups. 32 belong to the aforementioned departments. Two exist as independent junior research groups, which were established in 2006.



In 2014 an international committee evaluated the junior research group “Physiology of Learning and Memory” and recommended tenure.

In 2014, scientists at the Center for Neurology obtained more than 6.6 million Euros in third party funding and published 170 papers in peer reviewed journals.

In 2014, the Hertie Institute initiated a series of highly visible neuroscience lectures. The first Hertie-Lecture on Brain Research was given by Karl Deisseroth, M.D., Ph.D., of Stanford University. It took place in January 2014. Deisseroth inspired more than 300 neuroscientists from Tübingen’s neuroscience community with his lecture “Optical deconstruction of fully-assembled biological systems.” The entire Neuroscience Community in Tübingen has actively participated

by nominating internationally renowned scientists of the highest level as candidates for speakers.

Finally, the construction on the new building at the Tübingen site of the German Center for Neurodegenerative Diseases (DZNE) is making progress. As of May 2015, the new complex will house up to 150 scientists who will research diseases of the human nervous system, such as Alzheimer’s and Parkinson’s disease.

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)

*13 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. Die Neurologische Klinik besteht daher nach innen und außen weiterhin als einheitliche Struktur. In den Abteilungen sind zurzeit 18 Professoren und etwa 350 Mitarbeiter in 32 Arbeitsgruppen tätig. Hinzu kommen noch zwei unabhängige Forschungsgruppen.*

*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 2014 mehr als 6,6 Millionen Euro an Drittmitteln eingeworben und 170 Veröffentlichungen in wissenschaftlichen Fachzeitschriften publiziert. Diese Zahlen belegen u. a. die wissenschaftliche Leistungsfähigkeit des Zentrums. Die Gemeinnützige Hertie-Stiftung wendete bisher rund 30 Millionen Euro für das HIH auf und wird ihre Förderung fortsetzen*

*Im Jahr 2014 wurde gemeinsam mit den weiteren neurowissenschaftlichen Einrichtungen Tübingens die erste Hertie Lecture in Brain Research durchgeführt. Im Rahmen dieser jährlich stattfindenden Vorlesung wird ein international renommierter Neurowissenschaftler nach Tübingen geladen. Die erste Vorlesung findet im Januar 2014 statt. Karl Deisseroth, M.D., Ph.D., of Stanford University gab die erste Vorlesung zu dem Thema "Optical deconstruction of fully-assembled biological systems."*

*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. Mit Unterstützung einer Beratungsfirma fand 2014 ein „Vision-Mission-Prozess“ statt, durch den ein Leitbild erarbeitet und eine Reihe von Arbeitsfeldern zur weiteren Entwicklung definiert wurden.*



*In den Abteilungen sind zurzeit 18 Professoren und etwa 350 Mitarbeiter in 34 Forschungsgruppen tätig. Die Gemeinnützige Hertie-Stiftung wendete bisher rund 30 Millionen Euro für das HIH auf und wird ihre Förderung fortsetzen.*

*Ein weiterer innovativer Aspekt des HIH ist die Einrichtung von abteilungs-unabhängigen Junior-Arbeitsgruppen im „Tenure Track-Verfahren“. Die erste dieser Arbeitsgruppen, die sich schwerpunktmäßig mit neuro-regenerativen Prozessen des Rückenmarks beschäftigt, wurde im Frühjahr 2006 eingerichtet und 2010 aufbauend auf einer erfolgreichen internationalen Evaluierung in eine selbständige Arbeitsgruppe umgewandelt. Im Jahr 2013 nahm der Leiter dieser unabhängigen Forschungsgruppe die Professur „Restorative Neurowissenschaften“ am Imperial College in London an. Zusätzlich hierzu leitet er seine Gruppe weiterhin am HIH: Die zweite Gruppe „Lernen und Gedächtnis“ wurde Ende 2014 international evaluiert und zur Verstetigung empfohlen.*

*Im Jahr 2014 wurde gemeinsam mit den weiteren neurowissenschaftlichen Einrichtungen Tübingens die erste Hertie Lecture in Brain Research durchgeführt. Im Rahmen dieser jährlich stattfindenden Vorlesung wird ein international renommierter Neurowissenschaftler nach Tübingen geladen. Die erste Vorlesung findet im Januar*

*2014 statt. Karl Deisseroth, M.D., Ph.D., of Stanford University gab die erste Vorlesung zu dem Thema “Optical deconstruction of fully-assembled biological systems.”.*

*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. Im April 2015 wird der Neubau des DZNE bezogen werden.*

*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

Renate D. Fuhr  
(Head of Nursing Services)

Monika Renner  
(Deputy Head of Nursing Services)

Bernd Pfeuffer  
(Division Manager, Ward 42/43/45)

Bärbel Hauger (Deputy Division  
Manager, Ward 42/43/45)

Adriana Hurcikova (Deputy  
Division Manager, Ward 42/43/45)

Christine Reuter (Ward Manager, 44)

Annette Mögle  
(Deputy Ward Manager, 44)

### WARD 42

Ronja Bühler  
Anja Hutter  
Gabriele Kern-Braun  
Renate Maier Korneck  
Bettina Mollenhauer  
Ilse Polack  
Ulrike Rein  
Iris Sadowski  
Sarah Schneider  
Ulrike Schweizer  
Julia Sieberichs  
Gudrun Siegl  
Birgit Weimar  
Naemi Zimmermann

### WARD 43

Jane Buo  
Meike Besser  
Önder Bilen  
Friedhelm Chmell  
Annette Eisele  
Britta Eisemann  
Rebecca Fais  
Maria Flohr  
Alice Hoffmann  
Eva Kern  
Jürgen Kronmüller  
Dorothe Pacholleck  
Sina Westbomke  
Stephanie Zanfardino

### WARD 44

Andrea Albrecht  
Karin Brunner  
Ana-Maria Cheregi  
Jessica Deile  
Tobias Göttermann  
Kathrin Gray  
Susanne Grumann  
Carmen Haag  
Frank Hauber  
Marc-Sebastian Haug  
Stefanie Herholz  
Regina Johner  
Eftimia Kalpakli  
Petra Kaschowitz  
Luisa Biesinger  
Ines Lange  
Nina Melzer  
Samantha Mekanovic  
Christine Moosmann  
Birgit Moryson  
Markus Müller  
Petra Nipprasch  
Simone Ochieng  
Magdalena Rauch-Schmidt  
Heidi Riescher  
Claudia Romeikat  
Thomas Rottmann  
Mirjam Schäfer  
Johann Schmuck  
Tanja Striebich  
Lothar Villinger  
Marlene Wamsler-Lutz

Angelika Weber  
Gerda Weise  
Eva Wener Buck  
Dieter Zeller  
Ulrike Zimmermann

## WARD 45

Sigrid Baltés  
Johanna Eisele  
Isaac Emwinghare  
Tatjana Graz  
Werner Hansen  
Sigrid Herter  
Annika Hesse  
Michael Heymann  
Carolin Klebitz  
Beate Kloster  
Olga Krämer  
Stefanie Kurz  
Andrea Langmann  
Alisa Mansour-Tokovic  
Banu Sahin  
Hans Jürg Scholpp  
Matthias Schroth  
Karola Schweinbenz  
Anja Siegle  
Lena Stengel  
Isabel Utsch Sellnow

## NURSING ASSISTANTS

Khuzame Allouch  
Tamazur Allouch  
Irina Amosenka  
Luther Basa  
Roselyn Chin  
Ludovie Dagmil  
Joann Gallo  
Imad Kheireddine  
Christopher Kübler  
Gabriele Layla  
Christin Matthes  
Nikki Mortega  
Emely Paul  
Maritta Weipert

## INTENSIVE CARE/ STROKE UNIT

Andrea Albrecht  
Karin Brunner  
Jessica Deile  
Tobias Göttermann  
Kathrin Gray  
Susanne Grumann  
Carmen Haag  
Frank Hauber  
Marc-Sebastian Haug  
Stefanie Herholz  
Regina Johner  
Eftimia Kalpakli  
Petra Kaschowitz  
Luisa Kramhöller  
Ines Lange  
Samantha Mekanovic  
Annette Mögle  
Christine Moosmann  
Birgit Moryson  
Markus Müller  
Nora Müller  
Petra Nipprasch  
Simone Ochieng  
Magdalena Rauch-Schmidt  
Christine Reuter  
Heidi Riescher  
Claudia Romeikat  
Mirjam Schäfer  
Johann Schmuck  
Annika Schneider-Kargbo  
Gloria Sementilli  
Tanja Striebich  
Villinger Lothar  
Marlene Wamsler-Lutz  
Angelika Weber  
Gerda Weise  
Bettina Weisser  
Eva Wener Buck  
Dieter Zeller  
Ulrike Zimmermann

## CASE/OCCUPANCY MANAGEMENT

Ulrich Braun  
Silvia Clement  
Wilhelm Eissler  
Christina Tomschitz

## TECHNICIANS

Anke Deutsch (EP)  
Evelyn Dubois (CFS Chemistry)  
Siegfried Ebner (CSF Chemistry)  
Andrea Eckert (CSF Chemistry)  
(bis 07/2014)  
Jutta Grimm (EMG) (bis 10/2014)  
Renate Mahle (EEG Neurosonography)  
Yvonne Schütze  
Elke Stransky  
Deborah Tünnerhoff-Barth  
Nathalie Vetter (ENG Neurosonogra-  
phy)  
Kathrin Vohrer  
Barbara Wörner (EEG)

## SECRETARIES

Patricia Beck  
Dagmar Heller-Schmerold  
Isolde Marterer  
Christine Riegraf  
Susanne Stimmeler  
Diana Thomma  
Doris Wieder

## MEDICAL DOCUMENTATION

Sonja Brandner  
Christine Brick  
Horst Feuerbacher  
Victor Kadlec

# Department of Neurology and Stroke



## Clinical and Scientific Staff

### HEAD OF THE DEPARTMENT

Prof. Dr. Ulf Ziemann

### GROUP LEADERS/ATTENDING PHYSICIANS

Prof. Dr. Herrmann Ackermann  
PD Dr. Felix Bischof  
PD Dr. Jennifer Diedler (Neurointensive Care)  
PD Dr. Christine Meyer-Zürn (Cardiologist)  
Dr. Florian Müller-Dahlhaus  
Prof. Dr. Ulrike Naumann  
Dr. Sven Poli, MSc (Stroke Unit)  
Prof. Dr. Ghazaleh Tabatabai  
(Section Interdisciplinary Neurooncology; since 07/2014)

### SCIENTISTS/RESIDENTS

Dr. Asghar Abbasi (since 05/2014)  
Dr. Sarah Beyeler (since 08/2014)  
Dr. Bettina Brendel  
Dr. Christian Braun  
Dr. Susanne Dietrich  
Dr. Matthias Ebner (until 11/2014)  
Dr. Elga Esposito (until 05/2014)  
Dr. Alexandra Gaenslen (until 12/2014)  
Parameswari Govindarajan (since 11/2014)  
Florian Härtig  
PD Dr. Ingo Hertrich  
Dr. Marilyn Koch (since 02/2014)  
Dr. Manfred Neumann (since 11/2014)  
Dr. Hardy Richter (since 12/2014)  
Dr. Christoph Ruschil (since 02/2014)  
Franscesca Russo  
Dr. Susanne Schiemann  
Dr. Dennis Schlak  
Maria-Ioanna Stefanou (since 11/2014)  
Johannes Tünnerhoff  
Martin Wolf  
Dr. Lena Zeltner  
Dr. Carl Moritz Zipser (since 03/2014)  
Dr. Christoph Zrenner



**TECHNICAL STAFF/ADMINISTRATION**

Dipl.-Ing. Rüdiger Berndt (Electronics, together with the Dept. of Cognitive Neurology)  
 Dilan Celik (since 12/2014)  
 Dr. Paulami Danner (03-08/2014)  
 Evelyn Dubois  
 Siegfried Ebner  
 Andrea Eckert  
 Sarah Grzywna (since 05/2014)  
 Marion Jeric  
 Ute Küstner  
 Christine Ruth (until 02/2014)  
 Fotini Scherer (since 01/2014)  
 Petra Schroth  
 Anja Wuttke (until 10/2014)  
 Julia Zeller

**MEDICAL DOCTORAL STUDENTS**

Heiko Brennenstuhl (Supervisor Prof. Dr. Ulrike Naumann)  
 Hanna Faber (Supervisor Prof. Dr. Ulf Ziemann)  
 Sandra Falkvoll (Supervisor PD Dr. Felix Bischof)  
 Katharina Hadaschik (Supervisor Prof. Dr. Ulf Ziemann/  
 Dr. Sven Poli)  
 Ilona Hoberg (Supervisor PD Dr. Felix Bischof)  
 Yeho-Irae Kim (Supervisor Prof. Dr. Ulf Ziemann)  
 Julia Elisabeth Király (Supervisor Prof. Dr. Ulf Ziemann)  
 Chen Liang (Supervisor Prof. Dr. Ulf Ziemann)  
 Philipp Nakov (Supervisor PD Dr. Felix Bischof)  
 Katrin Schulz (Supervisor PD Dr. Felix Bischof)  
 Toni Silber (Supervisor PD Dr. Felix Bischof)  
 Claudius Speer (Supervisor PD Dr. Felix Bischof)  
 Charlotte Spencer (Supervisor Prof. Dr. Ulf Ziemann/  
 Dr. Sven Poli)  
 Jakob Spogis (Supervisor Prof. Dr. Ulf Ziemann)  
 Natalia Tveriakhina (Supervisor PD Dr. Felix Bischof)  
 Benjamin Walz (Supervisor PD Dr. Felix Bischof)

**PHD STUDENTS**

Angela Armento (Supervisor Prof. Dr. Ulrike Naumann)  
 Isabella Premoli (Supervisor Prof. Dr. Ulf Ziemann)  
 Srinath Rajaraman (since 05/2014;  
 Supervisor Prof. Dr. Ghazaleh Tabatabai)  
 Sonja Schötterl (Supervisor Prof. Dr. Ulrike Naumann)  
 Yi Wang (since 11/2014; Supervisor Prof. Dr. Ulf Ziemann)

**MASTER STUDENTS**

Simone Burckhardt (Supervisor PD Dr. Felix Bischof)  
 Maryam Geranmayeh (Supervisor PD Dr. Ingo Hertrich)  
 Felix Klostermann (BSc.; Supervisor Prof. Dr. Ulrike Naumann)  
 Bingshuo Li (Supervisors Prof. Dr. Cornelius Schwarz/  
 Prof. Dr. Ulf Ziemann)  
 Aleksandar Madjovski (Supervisor PD Dr. Felix Bischof)  
 Antranik Mavousian (BSc.; Supervisor Prof. Dr. Ulrike Naumann)  
 Sutirtha Ray (Supervisor PD Dr. Felix Bischof)  
 Alisa Selent (Supervisor PD Dr. Ingo Hertrich)

**PROFESSORSHIP FOR NEUROREHABILITATION**

Prof. Dr. Herrmann Ackermann  
 PD Dr. Ingo Hertrich

## Clinical Studies

### STROKE STUDIES

**ACTION (EudraCT: 2013-001514-15):** A multicenter, double-blind, placebo-controlled, randomized, parallel-group study to evaluate the safety and efficacy of intravenous natalizumab (bg00002) on reducing infarct volume in acute ischemic stroke.

*Investigator: Dr. Sven Poli*

**ATACH-II:** A phase III randomized multicenter clinical trial of blood pressure reduction for hypertension in acute intracerebral hemorrhage.

*Investigator: Dr. Sven Poli*

**CAPIAS (The carotid plaque imaging in acute stroke study):**

Protocol and initial baseline data

*Investigator: Prof. Dr. Ulf Ziemann*

**CLEAR-IVH III (EudraCT-Nr.: 2008-00691-39; Clot Lysis):**

Evaluating accelerated resolution of intraventricular hemorrhage phase III.

*Investigator: Dr. Sven Poli*

**CoolStroke1 (COOLing for Normothermia in Stroke 1):**

A randomized, controlled trial to evaluate the emcools brain.pad versus cold infusions for normothermia treatment in awake ischemic stroke patients.

*Investigator: Dr. Sven Poli*

**DEPTH-SOS:** Decompressive surgery plus hypothermia in space occupying stroke.

*Investigator: Dr. Sven Poli*

**Destiny-R:** Decompressive surgery for the treatment of malignant infarction of the middle cerebral artery – registry.

*Investigator: Sven Poli*

**ECASS-4 (EudraCT: 2012-003609-80):** European cooperative acute stroke study-4 extending the time for thrombolysis in emergency neurological deficits, (ECASS-4: EXTEND).

*Investigator: Dr. Sven Poli*

**EuroHYP1 (EudraCT: 2012-002944-25):** European multicenter, 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*

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

*Investigator: Dr. Sven Poli*

**Point-of-care measurements of coagulation under therapy with novel oral anticoagulants**

[Point-of-Care Messung der Blutgerinnung bei Therapie mit neuen oralen Antikoagulantien]

*Investigator: Dr. Sven Poli*

**RASUNOA:** Registry of acute stroke under new oral anticoagulants.

*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*

**Risk stratifikation of stroke patients by analysis of autonomic function (AKF programme)**

[Risikostatifizierung von Schlaganfallpatienten durch Analyse der autonomen Funktion (AKF-Programm)]

*Investigators: PD Dr. Christine Meyer-Zürn,*

*PD Dr. Jennifer Diedler*

**SITSopen:** An open, prospective, international, multicenter, 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*

**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: PD Dr. Felix Bischof*

**BEL 115123 (EudraCT-Nr: 2011-002068-26):** A randomized, placebo-controlled, double-blind study to evaluate the efficacy, safety, tolerability, and pharmacodynamics of belimumab in subjects with generalized myasthenia gravis (MG).

*Investigator: PD Dr. Felix Bischof*

### **CBAF312A2304 (EXPAND; EudraCT-Nr. 2012-003056-36):**

A multicenter, randomized, double-blind, parallel-group, placebo-controlled variable treatment duration study evaluating the efficacy and safety of Siponimod (BAF312) in patients with secondary progressive multiple sclerosis.

*Investigator: PD Dr. Felix Bischof*

**CFTY720D2406 (PASSAGE; NIS – Phase 4): Prospective, non-interventional, multinational study with parallel cohorts for evaluation of long-term safety in patients with MS, recently switched to daily fingolimod treatment, or treated with another disease-modifying therapy**

[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: PD Dr. Felix Bischof*

**CFTY720DDE02 (PANGAEA; NIS – Phase 4): Multicenter, prospective, non-interventional long-term register study for delineation of safety and relevance of Gilenya® (fingolimod 0.5 mg) in the treatment of MS patients (Post-Authorization non-interventional German safety study of Gilenya® in MS patients.)**

[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: PD Dr. Felix Bischof*

### **CFTY720D2405 (TRANSITION):**

**Two-year observational study to evaluate the safety profil of fingolimod in patients with multiple sclerosis after switch of treatment from natalizumab to fingolimod**

[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: PD Dr. Felix Bischof*

### **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*

### **ONO 4641POU007 (DreaMS; EudraCT-Nr. 2010-018705-11):**

A double-blind, placebo-controlled study of the safety and efficacy of ONO-4641 in patients with relapsing-remitting multiple sclerosis.

*Investigator: Prof. Dr. Ulf Ziemann*

**REGIMS Register: A register of immunotherapies to improve drug safety in multiple sclerosis**

[Ein Immuntherapieregister zur Verbesserung der Arzneimittelsicherheit in der Multiple Sklerose-Therapie.]

*Investigator: PD Dr. Felix Bischof*

**SIGNS:** An open, uncontrolled, non-interventional observational cohort outcome study of immunoglobulins in 3 indications: primary and secondary immunodeficiencies and neurological auto-immune disease.

*Investigator: PD Dr. Felix Bischof*

## Clinical Studies

**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

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

*Investigator: Dr. Christian Braun*

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

*Investigator: Dr. Christian Braun*

**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: Prof. Dr. med. Dr. rer. nat. Ghazaleh Tabatabai*

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

*Investigator: Dr. Daniel Zips/Co-investigator: Dr. Christian Braun*

## Third-Party Funding

### ONGOING GRANTS

**Perception of ultra-fast synthetic speech: mechanisms of neuroplasticity of auditive speech perception in blind people** [Perzeption ultraschneller synthetischer Sprache: Mechanismen der Neuroplastizität audativer Sprachwahrnehmung bei Blinden] (AC55/9-1)

*Project leader: Prof. Dr. Hermann Ackermann MA, Prof. Dr. Eberhart Zrenner*

*Funding institution: German Research Foundation (DFG)*

**Neuronal control of speech-related and non-speech-related movements of the articulatory apparatus: clinical studies**

[Neuronale Kontrolle sprachlicher und nichtsprachlicher Bewegungen des Sprechbewegungsapparates: Klinische Untersuchungen] (AC55/10-1)

*Project leader: Prof. Dr. Wolfram Ziegler,*

*Prof. Dr. Hermann Ackermann, MA*

*Funding institution: German Research Foundation (DFG)*

**Terminally differentiated B-lymphocytes in patients with multiple sclerosis** [Terminal differenzierte B-Lymphozyten bei Patienten mit Multipler Sklerose]

*Project leader: PD Dr. Felix Bischof*

*Funding institution: Novartis*

**Perception of multimodal emotional signals in patients with multiple sclerosis** [Verarbeitung multimodaler emotionaler Signale bei Patienten mit Multipler Sklerose]

*Project leader: PD Dr. Felix Bischof*

*Funding institution: Novartis*

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

*Project leader: PD Dr. Christine Meyer-Zürn, Dr. Sven Poli,*

*PD Dr. Jennifer Diedler*

*Funding institution: Medtronic*

**Study of the molecular mechanisms of the ISCADOR treatment of glioblastoma** [Erforschung der molekularen Mechanismen einer ISCADOR Behandlung des Glioblastoms]

*Project leader: Prof. Dr. Ulrike Naumann*

*Funding institution: Innovationsstiftung Sauer*

**Functional and therapeutic relevance of the neuropeptide-processing enzyme Carboxypeptidase E in glioblastoma** [Funktionelle und therapeutische Bedeutung des Neuropeptid-prozessierenden Enzyms Carboxypeptidase E im Glioblastom]  
*Project leader: Prof. Dr. Ulrike Naumann*  
 Funding institution: German Cancer Foundation

**Functional and therapeutic relevance of a treatment of glioblastoma with mistletoe lectins** [Funktionelle und therapeutische Bedeutung einer Behandlung des Glioblastoms mit Mistellektinen]  
*Project leader: Prof. Dr. Ulrike Naumann*  
 Funding institution: Innovationstiftung Sauer, Software AG, Verein für Krebshilfe

**Pharmacological characterization of TMS-EEG biomarkers of excitability and effective connectivity in human cortex**  
*Project leader: Prof. Dr. Ulf Ziemann*  
 Funding institution: Werner Reichardt Centre for Integrative Neuroscience (CIN)

**Correlated oscillations as biomarkers of neuronal dysfunction in multiple sclerosis**  
*Project leader: Prof. Dr. Ulf Ziemann, Prof. Dr. Markus Siegel*  
 Funding institution: Werner Reichardt Centre for Integrative Neuroscience (CIN)

**Non-invasive modulation of central pain by TMS-induced inhibition of the secondary somatosensory cortex in healthy subjects** [Nichtinvasive zentrale Schmerzmodulation durch TMS-Hemmung des sekundären somatosensorischen Kortex gesunder Probanden]  
*Project leader: Prof. Dr. Jörn Lötsch, Prof. Dr. Ulf Ziemann*  
 Funding institution: German Research Foundation (DFG)

**Sonification of arm movements for rehabilitation after stroke** [Bewegungsverklanglichung zur Rehabilitation der Armmotorik nach Schlaganfällen]  
*Project Leader: Prof. Dr. Eckart Altenmüller (Hochschule für Musik, Theater und Medien Hannover), Prof. Dr. Udo Dahmen (Popakademie Baden-Württemberg), Prof. Dr. Ulf Ziemann*  
 Funding institution: Hertie Foundation

## NEW GRANTS

**COOLing for Normothermia in Stroke 1 (COOLStroke 1)**  
*Project Leader: Dr. Sven Poli*  
 Funding institution: EMCOOLS Medical Cooling Systems AG

**Mechanisms of T-helper cell type 9-induced neuronal damage** [Mechanismen des T Helfer Typ 9 induzierten neuronalen Schadens]  
*Project Leaders: PD Dr. Felix Bischof, Philipp Nakov*  
 Funding institution: Interdisciplinary Center for Clinical Research (IZKF), Dissertation grant

**Perception of speech at normal and ultra-fast syllable rates – functional neuroplasticity in blind subjects and its relation to the normal speech processing network** (DFG HE 1573/6-2)  
*Project Leader: PD Dr. Ingo Hertrich*  
 Funding institution: German Research Foundation (DFG)

**Functional relevance of EMT-factors SLUG, SNAIL and TWIST expressed in pericytes of glioma-associated blood vessels** [Funktionelle Bedeutung der in Perizyten Gliom-assoziiierter Gefäße exprimierten EMT-Faktoren SLUG, SNAIL und TWIST]  
*Project Leader: Prof. Dr. Ulrike Naumann*  
 Funding institution: Henriette and Otmar Eier Foundation

**Appointment of outstanding physicians from abroad** [Berufung von Spitzenmedizinerinnen aus dem Ausland]  
*Project Leader: Prof. Dr. med. Dr. rer. nat. Ghazaleh Tabatabai*  
 Funding institution: Else Kröner Fresenius Foundation/ German Scholars Organization

**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: German Research Foundation (DFG)

**Drug Repositioning for Multiple Sclerosis – DrugRep – Teilvorhaben Zentrale Studienleitung (BMBF 16GW0059)**  
*Project Leader: Prof. Dr. Ulf Ziemann*  
 Funding institution: Federal Ministry of Education and Research

**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

## Third-Party Funding

### NEW GRANTS

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

*Project Leaders: Prof. Dr. Ulf Ziemann,*

*Prof. Dr. Christoph Braun*

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

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

*Project Leaders: Dr. Christoph Zrenner*

Funding institution: Medical Faculty University Tübingen, Fortüne Programme

## Awards

#### **Dr. Sven Poli**

2nd poster prize (ANIM, Annual meeting of neurointensive care medicine) Hannover 2014

## Medical Theses

(Completed in 2014)

Matthias Ebner

#### **Effects of local hypothermia and combination of local hypothermia with hyperoxygenation in a rat stroke model**

[Effekte von lokaler Hypothermie und der Kombination von lokaler Hypothermie mit Sauerstofftherapie in einem tierexperimentellen Schlaganfallmodell]

*Supervisor: Prof. Dr. Ulf Ziemann*

## Bachelor Theses

(Completed in 2014)

Vanessa Frische

#### **Tests in diagnosis of aphasia**

[Testmethoden der Aphasiediagnostik]

*Supervisor: PD Dr. Ingo Hertrich*

Maren Gäckle

#### **Efficacy of non-invasive brain stimulation in post-acute aphasia**

[Effektivität nicht-invasiver Hirnstimulationen bei postakuter Aphasie]

*Supervisor: PD Dr. Ingo Hertrich*

Anja Krapf

#### **Influence of cerebellar lesions on speech**

[Kleinhirnschäden und ihr Einfluss auf die Sprache]

*Supervisor: PD Dr. Ingo Hertrich*

Antranik Mavousian

#### **Generation and Characterization of an immortalized human brain vascular pericyte cell line**

*Supervisor: Prof. Dr. Ulrike Naumann*

Sina Neueder

#### **Aspects of speech control in bilingual subjects**

[Aspekte der Sprachkontrolle bei bilingualen Menschen]

*Supervisor: PD Dr. Ingo Hertrich*

## Diploma/Master Theses

(Completed in 2014)

Ruth Becker

### **Presuppositions in context – Testing the acceptability of definite and indefinite articles**

[Präsuppositionen im Kontext – Untersuchung zur Akzeptabilität des definiten und indefiniten Artikels]

*Supervisors: PD Dr. Ingo Hertrich,  
Prof. Dr. Wolfgang Sternefeld*

Bingshuo Li

### **Development of a complete method for in vivo electrophysiological investigation of transcranial magnetic stimulation in rodents**

*Supervisors: Prof. Dr. Ulf Ziemann, Prof. Dr. Cornelius Schwarz*

Aleksandar Madjovski

### **The role of N-linked glycosylation in differentiation and function of induced regulatory T cells**

*Supervisor: PD Dr. Felix Bischof*

Sutirtha Ray

### **Mechanisms of Th9 cell mediated neuronal damage**

*Supervisor: PD Dr. Felix Bischof*

Vladlena Sergeeva

### **Conceptualizing anthropomorphic in-vehicle speech dialogue systems: Effects of prompt language and persona traits on user satisfaction**

*Supervisors: Prof. Dr. Detmar Meurers,  
PD Dr. Ingo Hertrich*

## Habilitation

### **Jennifer Diedler (Shift of habilitation from Heidelberg to Tübingen)**

Neuromonitoring in stroke

### **Christine Meyer-Zürn (Cardiology)**

Risk stratification in cardiovascular disease by analysis of biosignals and biomarkers

[Risikostratifizierung bei kardiovaskulärer Erkrankung durch Analyse von Biosignalen und Biomarkern]

## Appointments

### **Ghazaleh Tabatabai**

Appointment as full professor (W3) of Neuro-Oncology

## Student Training

### **LECTURES**

(Summer Term/Winter Term)

### **Introduction to Clinical Neurology**

*Prof. Dr. Daniela Berg, PD Dr. Felix Bischof,  
PD Dr. Jennifer Diedler*

### **Graduate School of Cellular and Molecular Neuroscience: Genetic and Molecular Basis of Neural Diseases II**

*PD Dr. Felix Bischof*

### **Genetic and Molecular Basis of Neural Diseases II; Part 5: Brain tumors – Malignant growth in the CNS**

*Prof. Dr. Ulrike Naumann*

## Student Training

### SEMINARS AND COURSES

(Summer Term/Winter Term)

#### **Neurology Seminar and Bedside Teaching**

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

#### **Articulation and the brain – Neurophonetics, an emerging scientific discipline**

*PD Dr. Ingo Hertrich*

#### **Speech and emotion – meaning and prosody**

*PD Dr. Ingo Hertrich*

#### **Oncolytic viruses as cancer therapeutic drugs**

*Prof. Dr. Ulrike Naumann*

#### **Basics in Gene Therapy**

*Prof. Dr. Ulrike Naumann*

#### **Molecular Neurooncology and Neuroimmunology**

*Prof. Dr. Ulrike Naumann*

#### **Expression and involvement of I $\kappa$ B $\zeta$ in cell death in GBM cell lines**

*Prof. Dr. Ulrike Naumann*

#### **Determination of the paracrine effects of CPE on GBM cell migration and proliferation using live cell imaging**

*Prof. Dr. Ulrike Naumann*

#### **Seminar Experimental and Translational Neuro-Oncology**

*Prof. Dr. med. Dr. rer. nat. Ghazaleh Tabatabai*

## Conferences & Workshops

#### **GBS und CIDP – A workshop for patients**

University Hospital Tübingen, Neurology, 10.05.2014

*Coordinator: PD Dr. Felix Bischof*

#### **Novel treatments for multiple sclerosis – A workshop for patients**

University Hospital Tübingen, Neurology, 13.05.2014

*Coordinator: PD Dr. Felix Bischof*

#### **Tübingen treatment in neurology educational meeting**

[Tübinger Therapiefortbildung Neurologie]

University Hospital Tübingen, Neurology, 24.05.2014

*Scientific Coordinator: Prof. Dr. Daniela Berg*

#### **Inauguration symposium: neurovascular medicine at the University Tübingen**

University Hospital Tübingen, Neurology, 04.-05.07.2014

*Scientific Coordinators: Prof. Dr. Ulf Ziemann, Dr. Sven Poli*

#### **Novel neuroimaging techniques in multiple sclerosis**

University Hospital Tübingen, Neurology, 12.07.2014

*Coordinator: PD Dr. Felix Bischof*

#### **Heart & Brain: The cardioembolic stroke**

University Hospital Tübingen, Cardiology, 05.11.2014

*Scientific Coordinators: Prof. Dr. Tobias Geisler,*

*PD Dr. Christine Meyer-Zürn, Prof. Dr. Ulf Ziemann*



## Guest Researcher

Dr. Michell McDonnell, Australia  
(Travel fellowship of the German Academic  
Exchange Service, DAAD)  
*Host: Prof. Dr. Ulf Ziemann*

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  
Prof. Dr. Yvonne Weber  
Dr. Snezana Maljevic  
Prof. Dr. Marcel Dihné

### SCIENTISTS/RESIDENTS

Eva Auffenberg  
Felicitas Becker  
Maria Bither (until 09/2014)  
Merle Bock  
Dr. Nele Dammeier  
Dr. Gina Elsen  
Adham Elshahabi  
Dr. Caroline Freilinger  
Dr. Yvonne Füll (until 03/2014)  
Dr. Ulrike Hedrich  
Ashish Kaul Sahib  
Josua Kegele (since 10/2014)  
Dr. Silke Klamer  
Dr. Henner Koch  
Stefan Lauxmann  
Christina Lipski  
Dr. Yuanyuan Liu  
Dr. Pascal Martin  
Justus Marquetand  
Stephan Müller  
Cristina Niturad  
Dr. Filip Rosa  
Dr. Caroline Schell (until 06/2014)  
Dr. Julian Schubert  
Victoria Schubert (since 06/2014)  
Dr. Sören Stirn  
Dr. Nathalie Winter  
Dr. Stefan Wolking  
Dr. Thomas Wuttke

## TECHNICAL STAFF/ ADMINISTRATION

Patricia Beck  
 Ana Fulgencio-Maisch  
 Jane Gollub (until 03/2014)  
 Christian Hengsbach  
 Heidrun Löffler  
 Katja Michaelis  
 Sarah Rau  
 Susanne Stimmler  
 Doris Wieder  
 Nicole Zepezauer

## MEDICAL DOCTORAL STUDENTS

Katharina Hof  
 Julia Knaus  
 Nicole Kusch  
 Andreas Naros  
 Siona Pfeffer  
 Niklas Schwarz  
 Theresa Simperl  
 Anna Wagner

## INTERNSHIPS

Julia Trembinski  
*Supervisor: Dr. Snezana Maljevic*

Fereshteh ZareBidaki  
*Supervisors: Dr. Yuanyuan Liu,  
 Dr. Ulrike Hedrich*

Sabina Vejzovic  
*Supervisor: Dr. Snezana Maljevic*

Patricia Klemm  
*Supervisor: Dr. Ulrike Hedrich*

Chieh-Yu Cheng  
*Supervisor: Dr. Yuanyuan Liu*

Beatriz Molina Martinez  
*Supervisor: Dr. Gina Elsen*

Norman Sinnigen  
*Supervisor: Dr. Ulrike Hedrich*

Felicitas Horn  
*Supervisors: Dr. Snezana Maljevic,  
 Stephan Müller*

## Clinical Studies

**Vitoba (SP0973): A non-interventional study of the tolerability and seizure control of lacosamide when added to a single AED in routine clinical practice in patients with partial-onset seizures with or without secondary generalization.** [Eine nicht-interventionelle Beobachtungsstudie zur Evaluation der Verträglichkeit und der Anfallskontrolle mit VIMPAT als Zusatztherapie zu einem Basis-Anti-Epileptikum bei Epilepsiepatienten mit fokalen Anfällen, mit oder ohne sekundärer Generalisierung in der alltäglichen klinischen Praxis in Deutschland.]

*Investigator: Prof. Dr. Yvonne Weber*

**Victos (SP1065):** A non-interventional, observational study evaluating changes in total drug load and seizure frequency using Vimpat (lacosamide) in daily clinical practice in combination therapy with sodium channel blocking AEDs or non sodium channel blocking AEDs.

*Investigator: Prof. Dr. Yvonne Weber*

**Perampanel Study (Eisai332):** A double-blind, randomized, placebo-controlled, multicenter, parallel-group study with an open-label extension phase to evaluate the efficacy and safety of adjunctive perampanelin primary generalized tonic-clonic seizures.

*Investigator: Prof. Dr. Yvonne Weber*

**E-36 (Cyberonics):** Seizure detection and automatic magnet mode performance study device(s).

*Investigator: Prof. Dr. Yvonne Weber*

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

*Investigator: Prof. Dr. Yvonne Weber*

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

*Investigator: Prof. Dr. Yvonne Weber*

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

*Investigator: Prof. Dr. Yvonne Weber*

**A randomized, placebo-controlled, double-blind, multicenter clinical investigation to evaluate the performance and safety of the chordate system when used in the treatment of acute migraine attacks of moderate to severe intensity**

*Investigator: PD Dr. Tobias Freilinger*

**PredCh – Efficacy and safety of oral prednisone as add-on therapy in prophylactic treatment of episodic cluster headache: a randomized, placebo controlled parallel study**

*Investigator: PD Dr. Tobias Freilinger*

## Third-Party Funding

### GRANTS

#### Recruitment of patients with epilepsy for genetic and pharmacogenetic examinations

[Rekrutierung von Patienten für genetische und pharmakogenetische Untersuchungen bei Epilepsien]

*Project leader: Prof. Dr. Holger Lerche, Prof Dr. Yvonne Weber*

Funding Institution: German Society for Epileptology, UCB Pharma, foundation 'no epilep'

#### EuroEPINOM ICS-FP-005: Complex genetics of Idiopathic Epilepsies (CoGIE)

*Project leader: Prof. Dr. Holger Lerche (coordinator),*

*Dr. Snezana Maljevic*

Funding institution: German Research Foundation (DFG) (via ESF EUROCORES)

#### Epilepsy Pharmacogenomics: Delivering biomarkers for clinical use (EpiPGX)

*Project leader: Prof. Dr. Holger Lerche (Deputy coordinator)*

Funding institution: EU Seventh Framework Programme (FP7) (EU-279062)

#### German Network of Neurological and Ophthalmological Ion Channel Disorders (IonNeurONet)

*Project leader: Prof. Dr. Holger Lerche (Network-Coordinator),*

*Dr. Snezana Maljevic (Project leader)*

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

#### Gene panel diagnostic testing for patients with epilepsy

[Gen-Panel Diagnostik bei Patienten mit Epilepsie]

*Project leader: Prof. Dr. Yvonne Weber*

Funding institution: University of Tübingen (AKF)

#### Evaluating voxel-based functional connectivity measures in epilepsy

*Project leader: PD Dr. Niels Focke*

Funding institution: University of Tübingen (CIN pool project)

### NEW GRANTS

#### Post processing in epileptology

*Project leader: PD Dr. Niels Focke*

Funding institution: University of Tübingen (AKF)

#### 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)

#### 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)

#### Prophylactic treatment of hemiplegic migraine with lamotrigine – a pilot study

*Project leader: PD Dr. Tobias Freilinger*

Funding institution: Centre for Rare Diseases, Tübingen

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

*Project leader: Dr. Gina Elsen*

Funding institution: University of Tübingen (fortune)

## Diploma/Master/Doctoral Theses

### MSC THESIS

Kübra Gülmez

#### **Functional analysis of GRIN mutations found in idiopathic focal Epilepsies with rolandic spikes**

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

### MD THESIS

Julia Knaus

#### **Functional analysis of GABRA5 mutations in idiopathic generalized epilepsies**

[Funktionelle Analyse von GABRA5 Mutationen bei idiopathisch generalisierter Epilepsie]

*Supervisor: Prof. Holger Lerche*

### PHD THESES

Julian Schubert

#### **Identification of genetic causes of inherited epilepsies and related syndromes**

*Supervisor: Prof. Dr. Holger Lerche*

### HABILITATION

PD Dr. Niels Focke

#### **Voxel-based magnetic resonance imaging (MRI) in the field of epileptology**

[Voxel-basierte Magnet-Resonanz-Tomographie in der Epileptologie]

*Supervisor: Prof. Dr. Holger Lerche*

## Student Training

### Lecture neurology

*Prof. Dr. Thomas Gasser, Prof. Dr. Holger Lerche, Prof. Dr. Ulf Ziemann, Prof. Dr. Hans-Otto Karnath*

### Primary headache syndromes and neuropathic pain (lecture)

*PD Dr. Tobias Freilinger*

### Neurology seminar and bedside teaching

*PD Dr. Niels Focke, PD Dr. Tobias Freilinger*

### Neurological differential diagnosis and interactive clinical case discussions

*PD Dr. Tobias Freilinger*

### Management of neurological emergencies

*Prof. Dr. Marcel Dihné*

### Chronic pain syndromes – bedside teaching (QB14)

*PD Dr. Tobias Freilinger*

### Bedside training neurology and epileptology

*Prof. Dr. Yvonne Weber*

### Bedside training: neurological diagnostics

*Prof. Dr. Yvonne Weber*

### Genetic and Molecular Basis of Neural Diseases II: Channelopathies

*Prof. Dr. Holger Lerche, Dr. Snezana Maljevic*

### Lecture series on the fundamentals of Neurobiology – Part I + II

*Dr. Snezana Maljevic*

### Lecture series for doctoral candidates: Ion Channels and Epilepsy

*Prof. Dr. Holger Lerche*

### IPS C Journal Club

*Dr. Snezana Maljevic*

### CIN/HH Electrophysiology Journal Club

*Dr. Snezana Maljevic, Dr. Ingrid Erhlich*

## Conferences & Workshops

### **Young Neurologists Summer School 2014**

21.07. – 25.07.2014

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

### **Tuebingen's Training Workshop: Treatments in Neurology**

University Hospital Tübingen, Neurology, 24.05.2014

*Scientific Coordinator: Prof. Dr. Daniela Berg*

### **Neurology Refresher ("Facharztrepetitorium")**

German Neurological Society, 20.02.2015-22.02.2015

*Scientific Coordinators: Prof. Dr. Holger Lerche,  
PD Dr. Tobias Freilinger*

## Guest Researchers

Dr. Nino Maziashvili, Georgien

*Hosts: Prof. Dr. Holger Lerche, Dr. Snezana Maljevic,  
Dr. Ulrike Hedrich*

Prof. Dr. Steven Petrou, Melbourne, Australia

*Host: Prof. Dr. Holger Lerche, Dr. Snezana Maljevic*

# 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. Matthis Synofzik  
PD Dr. Tobias Wächter (until 06/2014)

### SCIENTISTS/RESIDENTS/PHD STUDENTS

Dr. Anja Apel  
Felix Bernhard  
Dr. Kathrin Brockmann  
Dr. Ibrahim Boussaad (until 05/2014)  
Christine Bus  
Andres Caballero  
Dr. Maik Engeholm  
Dr. Julia Fitzgerald  
Dr. Natalja Funk  
Dr. Sven Geisler  
Dr. Susanne Gräber-Sultan  
Dajana Grossmann (until 05/2014)  
Dr. Friederike Hans  
Dr. Stefan Hauser  
Dr. Holger Hengel  
Dr. Sebastian Heinzl  
Manon Herfurth  
Andreas Hummel (until 09/2014)  
Dr. Sandra Jäckel  
Stefanie Krüger  
Martin Kuss  
Dr. Stefanie Lerche  
Dr. Inga Liepelt-Scarfone  
Dr. Ebba Lohmann  
David Mack  
Dr. Carina Mielke  
Dr. Jennifer Müller vom Hagen  
Carolin Obermaier (until 05/2014)  
Emmy Rannikko  
Dr. Tim Rattay  
Erik Riesch  
Dr. Benjamin Roeben  
Carola Rotermund



Dr. Eva Schäffer  
 Marlieke Scholten  
 David Schöndorf  
 Claudia Schulte  
 Dr. Manu Sharma  
 Poonam Sood (until 04/2014)  
 Dr. Karin Srulijes  
 Katharina Stegen  
 Ulrike Sünkel  
 Marion Thierfelder  
 Catherine Thömmes  
 Janet van Uem  
 Dr. Adam Vogel  
 Dr. Daniel Weiß  
 Dr. Carlo Wilke  
 Dr. Julia Wolf  
 Isabel Wurster  
 Dr. Judith Zieker

## TECHNICAL STAFF/ ADMINISTRATION

Maren Albers  
 Cindy Boden  
 Christian Deuschle  
 Christian Erhardt  
 Dr. Jutta Eymann  
 Dr. Bettina Faust  
 Katharina Gauss  
 Christine Haaga  
 Ann-Kathrin Hauser  
 Tanja Heger  
 Heiderose Heiss  
 Susanna Hoffmann  
 Maike Hoffmeister  
 Dina Ivanjuk  
 Sandra Kauenhowen  
 Mirjam Knöll  
 Jürgen Kronmüller  
 Isolde Marterer  
 Brigitte Maurer (until 02/2014)  
 Corina Maetzler  
 Petra Mech  
 Katja Michaelis  
 Marita Munz  
 Susanne Nussbaum  
 Dr. Angelika Oehmig  
 Clara Pless (until 08/2014)  
 Ina Posner  
 Jennifer Reichbauer  
 Nicole Runge  
 Caroline Schönfeld

Lukas Kristoffer Schwarz  
 Susanne Stimmler  
 Dr. Anna-Katharina v. Thaler  
 Yvonne Theurer  
 Doris Wieder

## MEDICAL DOCTORAL STUDENTS

Grammato Amexi  
 Carolin Bellut  
 Alice Bernard  
 Aline Beyle  
 Christian Bormann  
 Barbara Brändle  
 Stefanie Brandt  
 Steffen Brenner  
 Christine Bus  
 Gabriela Carvajal  
 Bernhard Cerff  
 Steffen Dengler  
 Sarah Dilger  
 Daniela Egic  
 Karl Friedrich Ermisch  
 Ellen Fehlert  
 Kathrin Fischerkeller  
 Zofia Fleszar  
 Amina Flinsbach  
 Hannah Glonneger  
 Katharina Greulich  
 Eva Grüner  
 Leonie Guggolz  
 Alexandra Gutfreund  
 Jochen Hallwachs  
 Madeleine Heim  
 Sonja Herrmann  
 Max Hollweck  
 Daniel Holz  
 Malte Kampmeyer  
 Irene Kanyiki  
 Barbara Kattner  
 Sebastian Kleinhans  
 Johannes Klemt  
 Rosa Klotz  
 Sebastian Kormeier  
 Angela Kuhn  
 Lena Kuhn  
 Ebru Kusku  
 Sandra Lachenmaier  
 Martin Linzner  
 Mirjam Mächtel  
 Katrin Maier

Julian Meinhardt  
 Isabella Nasi-Kordhishi  
 Suzanne Nathan  
 Maxim Nechyporenko  
 Theofanis Ngamsri  
 Senait Ogbamicael  
 Franziska Ott  
 Sylvia Pflederer  
 Natalie Philipp  
 Kathrin Prahl  
 Deborah Prakash  
 Jens Rolinger  
 Saskia Schattauer  
 Carina Schelling  
 Anna Schöllmann  
 Patricia Schöpfer  
 David Scheibner  
 Ellen Silberhorn  
 Norbert Silimon  
 Johannes Sprengel  
 Jana Stäbler  
 Lena Stetz  
 Eva-Maria Strohmeier  
 Margarete Teresa Walach  
 David Weiss  
 Simon Weiss  
 Sofie Weiss  
 Richard Wüst

## MASTER STUDENTS

Sandra Hasmann  
 Madeline Jäggle  
 Selina Reich  
 Anna Summerer  
 Alexandra Taylor  
 Zuzanna Tkaczynska  
 Ulrike Ulmer

## DIPLOMA STUDENTS

Sonja Golombek  
 Philip Höflinger

## DIPLOMA STUDENTS

Max Güldner  
 Christiane Halder  
 Rahel Lewin

## Clinical Studies

**CAFQ056A2217 (AFQ-Extension):** A multicenter, randomized, double-blind, placebo-controlled phase-III-study to assess the efficacy of AFQ056 in reducing L-dopa induced dyskinesias.

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

**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. Günther Deuschl (Klinik für Neurologie, Kiel), Prof. Dr. Rejko Krüger, Dr. Daniel Weiss*

**StimCP – Effect of deep brain stimulation in the globus pallidus internus on the quality of life of young patients with dyskinetic cerebral palsy (CP)**

*Investigators: Prof. Lars Timmermann (Uniklinik Köln), Prof. Dr. Ingeborg Krägeloh-Mann (UKT), Prof. Dr. Alireza Gharabaghi (UKT), Prof. Dr. Rejko Krüger, Dr. Daniel Weiss*

**Open-label, 12-month safety and efficacy study of levodopa – carbidopa intestinal gel in levodopa-responsive Parkinson's disease subjects.**

*Investigator: Prof. Dr. Rejko Krüger*

**Combined stimulation of subthalamic nucleus and substantia nigra pars reticulata for the treatment of refractory gait disorders in Parkinson's disease.**

*Investigators: Prof. Dr. Rejko Krüger, Dr. Daniel Weiss*

**Global longterm registry of levodopa-carbidopa intestinal gel in levodopa-responsive Parkinson's disease subjects.**

*Investigator: Prof. Dr. Rejko Krüger*

**Efficacy and safety of deep brain stimulation of the pedunculopontine nucleus for the treatment of Parkinson's disease patients with severe gait disturbance**

*Investigators: Dr. Sorin Breit (UKT), Prof. Dr. Rejko Krüger, Prof. Dr. Alireza Gharabaghi (UKT), Prof. Dr. Christian Plewnia (UKT)*

**Functional electrical stimulation in hereditary spastic paraplegia**

*Investigators: Dr. Rebecca Schüle, Dr. Tim Rattay, Prof. Dr. Ludger Schöls*

**A dose escalation, proof of concept, phase IIa study to investigate the safety and tolerability, the pharmacokinetic and the pharmacodynamic of BN82451B in male patients with Huntington's disease.**

*Investigator: Prof. Dr. Ludger Schöls*

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

*Investigators: Dr. Matthis Synofzik, Dr. Winfried Ilg*

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

*Investigators: Dr. Matthis Synofzik, Dr. Winfried Ilg*

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

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

**A 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*

**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).

*Investigator: Dr. Katerina Freitag (UKT)*

**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®).

*Investigator: Dr. Tobias Wächter, Dr. Katerina Freitag (UKT)*

**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.

*Investigator: Dr. Katerina Freitag (UKT)*

**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.

*Investigator: Dr. Katerina Freitag (UKT)*

**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: Dr. Katerina Freitag (UKT)*

**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.

*Investigator: 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.

*Investigator: Dr. Eva Schäffer, Prof. Dr. Daniela Berg*

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

*Investigator: Dr. Eva Schäffer, Prof. Dr. Daniela Berg*

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

*Investigator: 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.

*Investigator: Isabel Wurster, Prof. Dr. Daniela Berg*

## Third-Party Funding

### ONGOING GRANTS

**CAFQ056A2217 in dyskinetic Parkinson's disease patients (AFQ-Extension)**

*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Novartis

**PPMI – The Parkinson's Progression Initiative**

*Project leader: Prof. Dr. Daniela Berg*

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

**Multimodal imaging of rare synucleinopathies (MultiSyn)**

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

Funding institution: EU

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

*Project leader: Prof. Dr. Philipp Kahle*

Funding institution: German Research Foundation (DFG)

**Functional characterization of the significance of mutations in the Omi/HtrA2 gene in the context of impaired mitochondrial function and dynamics in Parkinson's disease**

*Project leader: Prof. Dr. Rejko Krüger*

Funding institution: German Research Foundation (DFG)

**The importance of the Parkinson-associated protein mortalin in line with mitochondrial pathways of neurodegeneration**

*Project leader: Prof. Dr. Rejko Krüger*

Funding institution: Fritz-Thyssen-Foundation

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

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

*Dr. Jared Sternecker (MPI)*

Funding institution: German Research Foundation (DFG)

**Functional analysis of LRRK2 phosphorylation in human dopaminergic neurodegeneration**

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

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

## Third-Party Funding

### ONGOING GRANTS

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

*Project leader: Dr. Daniel Weiss*

Funding institution: German Research Foundation (DFG)

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

*Project leader: Dr. Daniel Weiss, Prof. Dr. Rejko Krüger*

Funding institution: Medtronic

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

*Project leader: Dr. Daniel Weiss, Prof. Dr. Rejko Krüger*

Funding institution: Medtronic

#### **Progression markers in the suspected premotor phase and early Parkinson's disease (Amendment)**

*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Janssen Pharmaceutica NV

#### **Competence Net Degenerative Dementias & Frontotemporal Dementias**

*Project leader: Prof. Dr. Philipp Kahle*

Funding institution: Federal Ministry of Education and Research

#### **Functional genomics of Parkinson's disease**

*Project leader: Prof. Dr. Philipp Kahle*

Funding institution: Federal Ministry of Education and Research

#### **Genetic disorders in arab societies of Israel and the Palestinian authorities**

*Project leader: Prof. Dr. Ludger Schöls*

Funding institution: German Research Foundation (DFG)

#### **Genetic basis of hereditary spastic paraplegias**

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

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

#### **Efficacy of read-through substances at nonsensemutation at HSP**

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

Funding institution: Förderverein für HSP-Forschung

#### **Protein interaction network analysis and pathway modeling for LRRK2**

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

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

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

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

Funding institution: German Research Foundation (DFG)

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

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

Funding Institution: German Center for Neurodegenerative Diseases (DZNE)

#### **Polyglutamine repeats and Parkinson's disease**

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

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

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

*Project leader: Prof. Dr. Ludger Schöls, Prof. Dr. Peter Bauer (UKT)*

Funding institution: EU

#### **Integrated European Project on Omics Research of Rare Neuromuscular and Neurodegenerative Diseases (NEU-ROMICS): Diagnosis and therapy project of Rare Neuromuscular and Neurodegenerative Diseases (NEUROMICS)**

*Project leader: Prof. Dr. Ludger Schöls, Prof. Dr. Olaf Rieß (UKT)*

Funding institution: EU

#### **Next generation genetics of axonopathies**

*Project leader: Dr. Rebecca Schüle*

Funding institution: EU

#### **Landscape**

*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Federal Ministry of Education and Research

#### **NIC-PD**

*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Philipps-University Marburg

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

Funding institution: Institute of Neurodegenerative Disorders, New Haven

**MJFF Research Grant 2012 “LRRK2 Mutation and Cancer Risk”***Project leader: Prof. Dr. Daniela Berg*

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

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

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

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

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

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

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

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

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

**OPTIMED***Project leader: Prof. Dr. Daniela Berg*

Funding institution: Federal Ministry for Economic Affairs and Energy

**Virtual Institute: RNA dysmetabolism in ALS and FTD***Project leader: Prof. Dr. Philipp Kahle*

Funding institution: German Center for Neurodegenerative Diseases (DZNE)

**Intersite Project: Compound screen to correct mitochondrial phenotypes in recessive Parkinson's disease***Project leader: Prof. Dr. Philipp Kahle*

Funding institution: German Center for Neurodegenerative Diseases (DZNE)

**Investigation of ubiquitination and phosphorylation events in the process of mitophagy***Project leader: Dr. Sven Geisler*

Funding institution: Fortüne Programme, University of Tübingen

**27 hydroxy-sterol toxicity in the pathophysiology of SPG5***Project leader: Prof. Ludger Schöls, Dr. Rebecca Schüle*

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

**SENSE-PARK:** Supporting and empowering Parkinson patients in their home environment using a novel sensory information system that monitors daily-life-relevant parameters of Parkinson's disease and their change.*Project leader: Prof. Dr. Walter Maetzler*

Funding institution: EU Seventh Framework Programme (FP7)

**Moving beyond***Project leader: Prof. Dr. Walter Maetzler*

Funding institution: EU Seventh Framework Programme (FP7)

**Quantitative analysis of step initiation in the idiopathic Parkinson's syndrome***Project leader: Prof. Dr. Walter Maetzler*

Funding institution: Interdisciplinary Center for Clinical Research (IZKF)

**Development of a screening tool for the treatment of chronic migraine with botulinum toxin***Project leader: Dr. Tobias Waechter*

Funding institution: Pharm-Allergan

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

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

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

Funding institution: International Parkinson's Fond

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

Funding institution: UCB

## Third-Party Funding

### ONGOING GRANTS

**MJFF Research Grant 2013 – Influence of immune subtypes on the LRRK2 phenotype**

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

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

**PPMI – Amendment: Genetic PPMI**

*Project leader: Prof. Dr. Daniela Berg*

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

**dPV Fellowship (Project 2013/2014)**

*Project leader: Prof. Dr. Daniela Berg*

Funding institution: Deutsche Parkinson Vereinigung (dPV)

**Observational study in non-demented patients with Parkinson's disease with lowered A-beta1-42 CFS levels**

*Project leader: Prof. Dr. Daniela Berg, Prof. Dr. Walter Mätzler*

Funding institution: Janssen Pharmaceutica NV

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

*Project leader: Dr. Matthis Synofzik*

Funding institution: Robert-Bosch-Foundation

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

*Project leader: Dr. Matthis Synofzik*

Funding institution: Katharina Witt Foundation

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

*Project leader: Dr. Matthis Synofzik*

Funding institution: Interdisciplinary Center for Clinical Research (IZKF)

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

*Project leader: Dr. Matthis Synofzik*

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

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

*Project leader: Dr. Matthis Synofzik*

Funding institution: Interdisciplinary Center for Clinical Research (IZKF)

### NEW GRANTS

**Glucocerebrosidase-associated neurodegeneration in Parkinson's disease and Gaucher disease**

*Project leader: Dr. Michela Deleidi*

Funding institution: Fritz-Thyssen-Foundation

**Investigating Parkinson's disease with engineered induced pluripotent stem cells**

*Project leader: Dr. Michela Deleidi*

Funding institution: Fortüne Programme, University of Tübingen

**interactions in the etiopathogenesis of Parkinson's disease: Role of inflammation**

*Project leader: Dr. Michela Deleidi*

Funding institution: Marie Curie Career Integration Grant (EU FP7)

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

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

Funding institution: Federal Ministry of Education and Research

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

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

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

**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

**mitoNET: Fission and fusion in mitochondrial diseases**

*Project leader: Prof. Dr. Ludger Schöls,*

*Prof. Dr. Doron Rapaport (UKT)*

Funding institution: Federal Ministry of Education and Research

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

*Project leader: Dr. Julia Fitzgerald*

Funding institution: Fortüne Programme, University of Tübingen

**Assessment of LRRK2 kinase activity in peripheral blood cells**

*Project leader: Prof. Dr. Thomas Gasser, Prof. Dr. Philipp Kahle, Dr. Kathrin Brockmann*  
Funding institution: Michael J. Fox Foundation

**Promesa Study**

*Project leader: Prof. Dr. Daniela Berg*  
Funding institution: Ludwig-Maximilians-University Munich

**Kyowa-Study 6002-14**

*Project leader: Prof. Dr. Daniela Berg*  
Funding institution: Kyowa Hakko Kirin Pharma

**Subaward agreement: Penetrance of LRRK2 in the MJFF LRRK2 consortium**

*Project leader: Prof. Dr. Daniela Berg*  
Funding institution: University of Columbia, Michael J. Fox Foundation for Parkinson's Research

**NIS-Azilect**

*Project leader: Prof. Dr. Daniela Berg*  
Funding institution: TEVA Pharma GmbH

**Subaward agreement: Cognition biomarkers**

*Project leader: Prof. Dr. Daniela Berg*  
Funding institution: Mayo Clinic, Michael J. Fox Foundation for Parkinson's Research

**Studie PD0013-Neupart**

*Project leader: Prof. Dr. Daniela Berg*  
Funding institution: UCB Biosciences GmbH

**Fox Trial Finder 2014**

*Project leader: Prof. Dr. Daniela Berg*  
Funding institution: Michael J. Fox Foundation for Parkinson's Research

**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 Parkinson-vereinigung e.V.

**Joint Research Project "Identification of prediction and progression biomarkers in the earliest stages of Parkinson's Disease (Neuro-D13B)"**

*Project leader: Prof. Dr. Daniela Berg, Prof. Dr. Walter Mätzler, Prof. Dr. Olaf Riess (UKT)*  
Funding institution: Federal Ministry of Education and Research, UCB Pharma GmbH

**Research project – Analysis of longitudinal data**

*Project leader: Prof. Dr. Daniela Berg*  
Funding institution: TEVA Pharma GmbH

**JPND working group "Standardization of biomarker studies in longitudinal studies of Parkinson's disease"**

*Project leader: Prof. Dr. Daniela Berg*  
Funding institution: Federal Ministry of Education and Research

**Cerebral networks for gait and balance in the prodromal phase of Parkinson's disease: A fMRI study**

*Project leader: Prof. Dr. Daniela Berg*  
Funding institution: Interdisciplinary Center for Clinical Research – IZKF-Promotionskolleg, University of Tübingen

**PMPP – Amendment 4**

*Project leader: Prof. Dr. Daniela Berg*  
Funding institution: Janssen Pharmaceutica NV

**Monocyte monitoring in LRRK2 associated Parkinson's disease**

*Project leader: Prof. Dr. Thomas Gasser, Dr. Saskia Biskup*  
Funding institution: Michael J. Fox Foundation for Parkinson's Research

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

*Project leader: Prof. Rachel Saunders-Pullman, Dr. Saskia Biskup*  
Funding institution: Michael J. Fox Foundation for Parkinson's Research

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

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

*Project leader: Dr. Matthias Synofzik*  
Funding institution: Fondation de l'Ataxie Charlevoix Saguenay

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

*Project leader: Dr. Matthias Synofzik*  
Funding institution: German Heredo-Ataxia Society

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

*Project leader: Dr. Matthias Synofzik*  
Funding institution: Actelion Pharmaceuticals

## Third-Party Funding

### NEW GRANTS

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

*Project leader: Dr. Matthias Synofzik*

Funding institution: Centre for Rare Diseases, Tübingen

## Awards

#### **Prof. Dr. Daniela Berg**

Dingebauer Award 2014

#### **Dr. Saskia Biskup**

EU Innovation Award 2014

#### **Dr. Kathrin Brockmann**

Habilitation stipend, Medical Faculty of Tübingen

#### **Christine Bus**

PINK1-Parkin: signalling in Parkinson's disease and beyond, biochemical society, selected oral communication

#### **Prof. Dr. Rejko Krüger**

PEARL Excellence Award for Research in Luxembourg, Fond National de Recherche, Luxembourg

#### **Dr. Benjamin Schmid**

Hertie Paper of the Year Award 2014

#### **Dr. Rebecca Schüle**

Marie-Curie Fellowship

#### **Dr. Daniel Weiss**

Poster-Award of the German Parkinson's disease Society 2014

## PhD Theses

(Completed in 2014)

Michela Deleidi

#### **In vitro and in vivo modeling of Parkinson's disease using induced pluripotent stem cells**

*Supervisor: Prof. Dr. Thomas Gasser*

Friederike Hans

#### **The Regulation of TDP-43 Ubiquitylation by UBE2E Ubiquitin-conjugating enzymes and Ubiquitin Isopeptidase Y**

*Supervisor: Prof. Dr. Philipp Kahle*

Emmy Rannikko

#### **Characterization of Parkinson's disease associated DJ-1 mutants and influence of $\alpha$ -synuclein on glial cells**

*Supervisor: Prof. Dr. Philipp Kahle*

Carola Rotermund

#### **Characterization of the influence of a high fat diet on the neurodegeneration of a mouse model for $\alpha$ -synucleinopathy**

*Supervisor: Prof. Dr. Philipp Kahle*

Poonam Sood

#### **Functional characterization of HtrA2 in the pathogenesis of Parkinson's disease**

*Supervisor: Prof. Dr. Rejko Krüger*

## Medical Theses

(Completed in 2014)

Annegret Abaza

#### **Essential tremor and idiopathic Parkinson's syndrome**

*Supervisor: Prof. Dr. Daniela Berg*

Christian Bormann

#### **Transcranial ultrasound and three-dimensional motion analysis for the identification of a risk group for Parkinson's disease**

*Supervisor: Prof. Dr. Daniela Berg*

Barbara Brändle

#### **Expression and variation of clinical markers in the early phase of Parkinson's disease**

*Supervisor: Prof. Dr. Daniela Berg*



Hannah Glonnegger

**Are slight limitations of everyday activities an early marker of dementia development in Parkinson's disease?**

*Supervisor: Prof. Dr. Daniela Berg*

Sebastian Kleinhans

**Dual tasking aspects of high-risk individuals for the idiopathic Parkinson's syndrome**

*Supervisor: Prof. Dr. Walter Maetzler*

Johannes Lang

**S100B as a marker for Lewy body diseases: A case-control study with determination of single base polymorphisms and serum and liquor values**

*Supervisor: Prof. Dr. Daniela Berg*

Isabella Nasi-Kordhishti

**Heart rate variability in depression taking into account medical, demographic and vascular factors**

*Supervisor: Prof. Dr. Daniela Berg*

Susanne Nathan

**Abnormalities of fine motor skills in patients at risk for Parkinson's disease**

*Supervisor: Prof. Dr. Daniela Berg*

Lara Paulig

**Dual-tasking in Parkinson's patients – effects of deep brain stimulation and medication**

*Supervisor: Prof. Dr. Walter Maetzler*

Deborah Prakash

**Validity of the diagnostic criteria for dementia in Parkinson's disease – importance of assessing the everyday activities and their influence**

*Supervisor: Prof. Dr. Daniela Berg*

Eva Schäffer

**Prospective clinical and ultrasound studies of Parkinson's patients diagnosed more than 5 years to capture the relationship between depression and the development of Dyskinesias**

*Supervisor: Prof. Dr. Daniela Berg*

Carina Schelling

**Mutation analysis and association study in mortalin/Grp75 gene in German Parkinson's patients**

*Supervisor: Prof. Dr. Rejko Krüger*

Sonja Schürger

**Functional and structural effects of ventricular 6-hydroxy-dopamine lesion and the following rotarod training in the animal model**

*Supervisor: Prof. Dr. Daniela Berg*

Raphaela Stocker

**The quality of sound condition by transcranial sonography in the diagnosis of Parkinson's syndrome and their influence on the displayed structures**

*Supervisor: Prof. Dr. Daniela Berg*

David Weiss

**Sit-to-stand parameters in high-risk individuals for Parkinson's disease compared to controls and Parkinson's patients**

*Supervisor: Prof. Dr. Walter Maetzler*

Carlo Wilke

**The plasticity of the perception of one's own actions**

*Supervisor: Prof. Dr. Hans-Peter Thier, Dr. Axel Lindner, Dr. Matthis Synofzik*

## Bachelor Theses

(Completed in 2014)

Max Güldner

**Mutations in the vacuolar ATPase ATP6AP2 and the small GTPase RAB39B in causal relation to X-linked atypical Parkinsonism**

*Supervisor: Prof. Dr. Thomas Gasser*

Christiane Halder

**TRAP1 mutations in familial Parkinson's disease**

*Supervisor: Prof. Dr. Thomas Gasser*

Rahel Lewin

**Mitochondrial quality control pathways: relevance to Parkinson's disease**

*Supervisor: Prof. Dr. Rejko Krüger*

## Diploma/Master Theses

(Completed in 2014)

Christine Bus

**Generation and characterization of a knock-out of the PD associated gene PINK1 in human iPS cells using TALEN technology**

*Supervisor: Prof. Dr. Thomas Gasser*

Morad Elshehabi

**Effect of cognitively challenging tasks on walking in Parkinson's patients**

*Supervisor: Prof. Dr. Walter Maetzler*

Sandra E. Hasmann

**„Eine gute Nase für etwas haben“ – subjective and objective olfactory dysfunction in association with affection, aging, and prodromal risk markers of neurodegeneration – the TREND study**

*Supervisor: Prof. Dr. Walter Maetzler*

Anna Summerer (master biology; RWTH Aachen)

**Is the transport of hFUS (especially hFUS - P525L) in Drosophila melanogaster methylation – dependent and which enzymes mediate this methylation?**

*Supervisor: Prof. Dr. Philipp Kahle*

Zuzanna Tkaczynska

**Amyloid beta and cognitive decline in non-demented Parkinson's patients**

*Supervisor: Prof. Dr. Daniela Berg*

Ulrike Ulmer

**“Genome editing” approach to generate a GBA1 knock out in human induced pluripotent cells**

*Supervisor: Prof. Dr. Thomas Gasser*

## Student Training

### Introduction to Clinical Neurology

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

### Lecture Neurology

*Prof. Dr. Thomas Gasser, Prof. Dr. Holger Lerche, Prof. Dr. Ulf Ziemann, Prof. Dr. Hans-Otto Karnath*

### Neurochemistry and Neurotransmitters

*Prof. Dr. Philipp Kahle*

### Biochemistry II

*Prof. Dr. Philipp Kahle*

### Neurobiochemistry

*Prof. Dr. Philipp Kahle*

### Parkinson's for pharmacists

*Prof. Dr. Ludger Schöls*

### Neurogenetic research

*Prof. Dr. Ludger Schöls*

### Neurogeriatrics (QB7)

*Prof. Dr. Walter Maetzler*

## GRADUATE SCHOOL FOR MOLECULAR AND CELLULAR NEUROSCIENCE

### Genetic and Molecular Basis of Neural Diseases

*Prof. Dr. Thomas Gasser, Prof. Dr. Mathias Jucker, Prof. Dr. Ludger Schöls, Dr. Frank Baumann*

### Laboratory Rotation Neuroscience/Neurobiology

*Prof. Dr. Mathias Jucker, Prof. Dr. Thomas Gasse, Prof. Dr. Ludger Schöls, Prof. Dr. Rejko Krüger, Prof. Dr. Philipp Kahle, Prof. Dr. Holger Lerche*

## CURRICULUM MOLECULAR MEDICINE

### Module Neurobiology

*Prof. Dr. Thomas Gasser, Prof. Dr. Holger H. Lerche, Dr. Snezana Maljevic, Prof. Dr. Arthur Melms, Prof. Dr. Ulrike Naumann, Prof. Dr. Bernd Wissinger*

## Seminars and Courses

(Summer Term/Winter Term)

### IPSC Journal Club

*Dr. Snezana Maljevic*

### Neurological examination for advanced students

*Prof. Dr. Thomas Gasser, Prof. Dr. Rejko Krüger,  
Prof. Dr. Walter Maetzler, Prof. Dr. Ludger Schöls*

### Geriatric-neurological-psychiatric case conference

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

### Therapy seminar of the neurological clinic

*Prof. Dr. Holger Lerche, Prof. Dr. Ulf Ziemann,  
Prof. Dr. Thomas Gasser, Prof. Dr. Rejko Krüger,  
Prof. Dr. Hans-Peter Thier*

### Neuropathological case meeting

*Prof. Dr. Manuela Neumann (Dept. of Neuropathology,  
University Hospital Tübingen)*

### Neurological examination course

*Prof. Dr. Thomas Gasser, Prof. Dr. Holger Lerche,  
Prof. Dr. Ulf Ziemann*

### Neurological seminar

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

### Scientific Colloquium Neurology ("Wednesday Colloquium")

*Prof. Dr. Rejko Krüger, Prof. Dr. Walter Maetzler*

### Bedside teaching: Neurological examination for advanced students

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

### Neurological palliative care

*Dr. Matthias Synofzik*

## Guest Researchers

Morad Elshehabi, Egypt

*Host: Prof. Dr. Walter Maetzler*

Dr. Andrea Pilotto, Italy

*Host: Prof. Dr. Daniela Berg*

Dr. Juan Rodriguez, Spain

*Host: Prof. Dr. Daniela Berg*

Dr. Naoto Sugeno, Japan

*Host: Prof. Dr. Philipp Kahle*

Dr. Rezzak Yilmaz, Turkey

*Host: Prof. Dr. Daniela Berg*

# Department of Cognitive Neurology



## Clinical and Scientific Staff

### HEAD OF THE DEPARTMENT

Prof. Dr. Peter Thier

### GROUP LEADERS/ATTENDING PHYSICIANS

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

### SCIENTISTS/RESIDENTS

Dr. Marissa Barabas  
Dr. Alia Benali  
Dr. Shubhodeep Chakrabarti  
Dr. Enrico Chiovetto  
Dr. Bianca de Haan  
Dr. Peter Dicke  
Dr. Dominik Endres (until 04/2014)  
Dr. Winfried Ilg  
Dr. Bettina Joachimsthaler  
Dr. Eva Joosten (until 05/2014)  
Dr. Axel Lindner  
Dr. Christine Pedroarena  
Dr. Jörn Pomper  
Dr. Maren Prass  
Dr. Johannes Rennig  
Dr. Dr. Silvia Spadacenta  
Dr. Matthias Valverde Salzmann

### TECHNICAL STAFF/ADMINISTRATION

Mirjana Angelovska  
Ina Baumeister  
Rüdiger Berndt  
Dr. Friedemann Bunjes  
Dagmar Heller-Schmerold  
Ute Großhennig  
Dr. Martin Löffler (until 06/2014)  
Björn Müller  
Ursula Pascht

**PHD DOCTORAL STUDENTS**

Daniel Arnstein (until 09/2014)  
 Tobias Beck (until 08/2014)  
 Christoph Budziszewski  
 André Maia Chagas  
 Ian Chong  
 Sonja Cornelsen  
 Leonid Fedorov  
 Martina Feierabend  
 Salah Hamodeh (until 11/2014)  
 Julian Hofmann  
 Mohammad Hovaidi Ardestani  
 Marc Junker (until 06/2014)  
 Mohammad Khazali  
 Bingshuo Li  
 Dongyun Li  
 Joana Loureiro  
 Nicolas Ludolph  
 David Mack  
 Haian Mao  
 Karolina Marciniak  
 Albert Mukovskiy  
 Maysam Oladazimi  
 Artur Pilacinski  
 Hamidreza Ramezanzpour  
 Manuel Roth  
 Cornelia Schatton  
 Akshay Sharma  
 Azam Shahvaroughi-Faharani  
 Aleksandra Smilgin (until 09/2014)  
 Christoph Sperber  
 Oleg Spivak  
 Zong-Peng Sun  
 Nick Taubert  
 Maike van Lessen  
 Christian Waiblinger  
 Melanie Wallscheid (until 12/2014)  
 Shengjun Wen  
 Lisa Wittenhagen (until 08/2014)

**MEDICAL DOCTORAL STUDENTS**

Heike Beha  
 Friedemann Bender  
 Maria Bither  
 Maria Sophie Breu  
 Zofia Fleszar  
 Anna Margareta Friemann  
 Karla Lauer  
 Julian Meßner (external)  
 Kira Marquardt  
 Evgeny Sheygal  
 Tine Stoll  
 Carlo Wilke (until 09/2014)  
 Thekla Zekos  
 Lisa Ziegler

**MASTER STUDENTS**

Mareike Gann  
 Anne Kirschner  
 Kathrin Kutscheidt (until 07/2014)  
 Junru Li  
 Verena Lohmüller (until 12/2014)  
 Katrina Quinn  
 Pouyan Rafieifard (until 12/2014)  
 Matthias Uhl

## Clinical Studies

### **Quantification of subtle movement changes in healthy subjects with increased echogenicity of the substantia nigra**

*Investigators: Dr. Winfried Ilg, Dr. Inga Liepelt, Caroline Urban, Nina Röhrich, Prof. Dr. Martin Giese, Prof. Dr. Daniela Berg*

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

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

### **Motor learning in patients suffering from cerebellar ataxia**

*Investigators: Dr. Winfried Ilg, Dr. Matthias Synofzik, Susanne Burkhard, Doris Brötz, Prof. Dr. Martin Giese, Prof. Dr. Ludger Schöls*

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

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

### **Contributions of parietal cortex to the perception of self-action**

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

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

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

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

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

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

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

## Third-Party Funding

### ONGOING GRANTS

#### **Corticofugal control of brainstem sensory gating in the rodent whisker system**

(CH 1232/1-1)

*Project leader: Dr. Shubhdeep Chakrabarti*

Funding institution: German Research Foundation (DFG)

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

(HA 5839/3-1)

*Project leader: Dr. Bianca de Haan,*

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

Funding institution: German Research Foundation (DFG)

#### **Setup and maintenance of the Section for Computational Sensomotorics**

(EXC 307 – CIN)

*Project leader: Prof. Dr. Martin Giese*

Funding institution: German Research Foundation (DFG)

#### **Neural encoding of visual action stimuli in mirror neurons in monkey premotor area F5**

(GI 305/4-1)

*Project leader: Prof. Dr. Martin Giese,*

*Prof. Dr. Hans-Peter Thier*

Funding institution: German Research Foundation (DFG)

#### **Adaptive modular architecture for rich motor skills**

(ICT-248311-AMARSi)

*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)

#### **The Human Brain Project**

(FP7-ICT-2013-FET-F/604102 – HBP)

*Project leader: Prof. Dr. Martin Giese*

Funding institution: EU

#### **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

**Functional neuroimaging of the human tectum**

(EXC 307-CIN)

*Project leader: Dr. Marc Himmelbach,**Prof. Dr. Dr. Hans-Otto Karnath*

Funding institution: German Research Foundation (DFG)

**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)

**The impact of object recognition on neural networks of reach-to-grasp control** (doctoral scholarship Evgeny Sheygal)

(PK 2012-23)

*Project leader: Dr. Marc Himmelbach*

Funding institution: Interdisciplinary Center for Clinical Research Post Graduate Programme

**Disorders of motor control due to parietal and temporal cortical brain damage**

(KA 1258/10-1)

*Project leader: Prof. Dr. Dr. Hans-Otto Karnath,**Dr. Marc Himmelbach*

Funding institution: German Research Foundation (DFG)

**Statistical voxel-based lesion analysis in aphasia and acalculia**

(KA 1258/11-1)

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

Funding institution: German Research Foundation (DFG)

**Selective auditory special attention in complex acoustic environments**

(KA 1258/12-1)

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

Funding institution: German Research Foundation (DFG)

**Mechanisms and disorders in visually controlled every day actions**

(KA 1258/15-1)

*Project leader: Prof. Dr. Dr. Hans-Otto Karnath,**Prof. Dr. Martin Giese*

Funding institution: German Research Foundation (DFG)

**Reorganisation of cognitive functions after stroke**

(56025963)

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

Funding institution: The German Academic Exchange Service (DAAD)

**National Network of Computational Neuroscience (Bernstein Center): Neural representations of sensory predictions for perception and action, project C4***Project leader: Dr. Axel Lindner, Prof. Dr. Martin Giese*

Funding institution: Federal Ministry of Education and Research

**National Network of Computational Neuroscience (Bernstein Center): Imaging neuronal population coding during perception in awake behaving animals, project B2***Project leader: Prof. Dr. Cornelius Schwarz*

Funding institution: Federal Ministry of Education and Research

**D-USA-Cooperation: How dynamic is neuronal coding? Condition-dependant stimulus selectivity in thalamo-cortical networks in the whisker system of the rat**

(01GQ1113)

*Project leader: Prof. Dr. Cornelius Schwarz*

Funding institution: Federal Ministry of Education and Research

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

(SCHW 577/10-2)

*Project leader: Prof. Dr. Cornelius Schwarz*

Funding institution: German Research Foundation (DFG)

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

(SU 171/3-1)

*Project leader: PD Dr. Fahad Sultan*

Funding institution: German Research Foundation (DFG)

**Towards the neural basis of joint attention**

(TH 425/12-1)

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

Funding institution: German Research Foundation (DFG)

## Third-Party Funding

### ONGOING GRANTS

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

(TH 425/14-1)

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

Funding institution: German Research Foundation (DFG)

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

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

*Prof. Dr. Martin Giese*

Funding institution: Federal Ministry of Education and Research

### NEW GRANTS

**CoglMon – Cognitive Interaction in Motion**

(EU H2020-ICT-2014 644727)

*Project leader: Prof. Dr. Martin Giese*

Funding institution: EU

**Reorganisation of cognitive functions after stroke**

(57106574)

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

Funding institution: The German Academic Exchange Service (DAAD)

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

*Project participant: Dr. Marc Himmelbach*

Funding Institution: Carl Zeiss Foundation

**Investigating body representation distortions in patient population using biometric self-avatars in virtual reality**

(EXC307-CIN)

*Project leaders: Prof. Dr. Betty Mohler (MPI),*

*Prof. Dr. Stephan Zipfel, Prof. Dr. Dr. Hans-Otto Karnath,*

*Dr. Hong Yu Wong (CIN), Prof. Dr. Michael Black (MPI)*

Funding institution: German Research Foundation (DFG)

**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 leaders: Prof. Dr. Cornelius Schwarz*

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 Programme



## Awards

### Nicolas Ludolph

Scholarship „Studienstiftung des Deutschen Volkes“

### Hamidreza Ramezanzpour

Iranian Neuroscience Community Travel Award and Certificate of Excellence in Research by the Iranian neuroscience community (IRNSC), Washington DC, November 2014

## PhD Theses

(Completed in 2014)

Petya Georgieva

**Active perception of virtual texture frequency in the whisker-related sensorimotor system of the rat**

*Supervisor: Prof. Dr. Cornelius Schwarz*

Bettina Joachimsthaler

**Two-photon imaging of structural plasticity underlying classical eyeblink conditioning in mouse barrel cortex**

*Supervisor: Prof. Dr. Cornelius Schwarz*

Johannes Rennig

**Neuronal and behavioral mechanisms of Gestalt perception**

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

Ida Zündorf

**Spatial auditory processing and selective attention**

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

## Bachelor Theses

(Completed in 2014)

Galina Henz

**Shifts of attention in video-game players and non-players**

*Supervisor: Prof. Dr. Uwe Ilg*

Charlotte Mezö

**Scan path details in experienced chess players and novices**

*Supervisor: Prof. Dr. Uwe Ilg*

## Diploma/Master Theses

(Completed in 2014)

Katrin Kutscheidt

**What moved where – an fMRI-study on object correspondence using the Ternus display**

*Supervisor: Dr. Axel Lindner*

Bingshuo Li

**Development of a complete method for in vivo electrophysiological investigation of transcranial magnetic stimulation in rats**

*Supervisor: Prof. Dr. Cornelius Schwarz*

Verena Lohmüller

**Influence of video-game play on the performance in the counter-manding task**

*Supervisor: Prof. Dr. Uwe Ilg*

Pouyan Rafieifard

**New device for the study of sensorimotor learning of hand movements**

*Supervisor: Prof. Dr. Martin Giese*

## Conferences & Workshops

### **7th Primate Neurobiology Conference**

Tübingen, 26.-27.03.2014

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

### **Summer Holiday Camp for Neuroscience**

Tübingen, 03.-07.08.2014

*Scientific Coordinator: Prof. Dr. Uwe Ilg*

### **High-School Teacher Education: Classroom Experiments**

Bad Wildbad, 14.-16.07.2014

*Scientific Coordinator: Prof. Dr. Uwe Ilg*

### **Spring School START 2014**

Tübingen, 30.04.-03.05.2014

*Scientific Coordinator: Prof. Dr. Uwe Ilg*

### **EMPATHY & SOCIAL INTERACTION – Mechanisms, disorders, social implications**

Tübingen International Summer School (TISS)

Cloister Heiligkreuztal, 22.-25.09.2014

*Scientific Coordinators: Ruth Conrad, Dominik Gerstorfer (Forum Scientiarum), Dr. Axel Lindner, Dr. Kirsten Volz (CIN)*

## Student Training

### LECTURES

(Summer Term/Winter Term)

### GRADUATE SCHOOL FOR BEHAVIORAL NEUROSCIENCE

#### **Motor Systems**

*Prof. Dr. Hans-Peter Thier*

#### **Neurophysiology**

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

#### **Dynamics of Neural Systems**

*Prof. Dr. Martin Giese*

#### **Behavior and Cognition: Neuropsychology**

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

#### **Fundamentals of Sensorimotor Integration**

*Prof. Dr. Uwe Ilg*

#### **Functional Neuroanatomy**

*PD Dr. Fahad Sultan*

#### **Machine Learning II**

*Prof. Dr. Martin Giese, Dr. Dominik Endres*

#### **Methods in Neuropsychology**

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

#### **Perception, Cognition & Behavior**

*Dr. Marc Himmelbach*

#### **Neural Motor Control**

*Dr. Winfried Ilg*

#### **Motor Systems NIPS**

*Dr. Winfried Ilg, Prof. Dr. Cornelius Schwarz*

## SEMINARS AND COURSES

(Summer Term/Winter Term)

### Neurocolloquium

*Prof. Dr. Hans-Peter Thier*

### Neurobiological Monday Seminar

*Prof. Dr. Uwe Ilg*

### Lab Practicals Neurophysiology

*Prof. Dr. Cornelius Schwarz*

### Current Problems in Neuropsychology

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

### Addressing Current Questions in Research on Sensorimotor Coordination

*Prof. Dr. Hans-Peter Thier*

### The Neurobiology of the Cerebellum

*Prof. Dr. Hans-Peter Thier*

### Machine Learning II (exercises)

*Prof. Dr. Martin Giese, Dr. Enrico Chiovetto*

### Dynamics of Neural Systems (exercises)

*Prof. Dr. Martin Giese, Tobias Beck*

### Animal Physiology Practical for Students of Bioinformatics (BSc)

*Prof. Dr. Uwe Ilg*

### Neural Prosthetics

*Dr. Axel Lindner*

### Technical Didactics: Neuroscience in the Classroom

*Prof. Dr. Uwe Ilg*

### Summer School: Multisensory Perception for Action

*Prof. Dr. Uwe Ilg*

## Guest Researchers

Prof. Dr. Stuart Baker, UK

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

# Department of Cellular Neurology



## Clinical and Scientific Staff

### HEAD OF THE DEPARTMENT

Prof. Dr. Mathias Jucker

### GROUP LEADERS

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

### SCIENTISTS/RESIDENTS

Mehtap Bacioglu  
Karoline Degenhardt  
Timo Eninger (since 06/2014)  
Sarah Fritschi  
Dr. Petra Füger  
Stephan Käser  
Jasmin Mahler  
Dr. Luis Maia (until 04/2014)  
Dr. Anne-Marie Marzcesco (until 10/2014)  
Renata Novotny  
Dr. Jörg Odenthal  
Jay Rasmussen (since 07/2014)  
Juliane Schelle  
Manuel Schweighauser  
Dr. Angelos Skodras  
Dr. Matthias Staufenbiel  
Dr. Bettina Wegenast-Braun  
Lan Ye

## TECHNICAL STAFF/ ADMINISTRATION

Anika Bühler  
Simone Eberle  
Bernadette Graus  
Christian Krüger  
Marius Lambert  
Ulrike Obermüller  
Claudia Schäfer

## MASTER STUDENTS

Autumn Otchengco (since 12/2014)  
Julia Stolz (until 05/2014)  
Andrew Youssef (until 06/2014)

## Clinical Studies

### **DIAN Dominantly Inherited Alzheimer Network:**

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

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

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

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

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

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

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

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

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

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

## Third-Party Funding

### ONGOING GRANTS

#### Generation of APP transgenic mice

*Project leader: Prof. Dr. Mathias Jucker*

Funding institution: Koesler

#### Research fellowship

*Project leader: Luis Oliveira da Maia*

Funding institution: Ministério da Ciência e de Tecnologia, Lisboa

#### Research fellowship

*Project leader: Lan Ye*

Funding institution: China Scholarship Council

#### Donation for Alzheimer's biomarker research

*Project leader: Prof. Dr. Mathias Jucker*

Funding institution: Anonymous donor

#### Organotypic slice cultures (031A198A)

*Project leader: Prof. Dr. Mathias Jucker*

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

#### Characterization of early protopathic seeds in Alzheimer's disease

*Project leader: Prof. Dr. Mathias Jucker,*

*Dr. Anne-Marie Marzesco*

Funding institution: Academy of Sciences and Humanities in Hamburg

#### Mechanisms of microglial 'priming' and its consequences for secondary brain pathology

*Project leader: Dr. Jonas Neher*

Funding institution: University Hospital Tübingen (Fortüne Programme, F.1314050)

#### Intersite research grant DIAN (Tübingen site)

*Project leader: Prof. Dr. Mathias Jucker*

Funding institution: German Center for Neurodegenerative Diseases (DZNE)

#### Induction of amyloid-beta aggregation by exosomes

*Project leader: Dr. Yvonne Eisele*

Funding institution: Alzheimer Research Initiative e.V.

### NEW GRANTS

#### Generation of APP transgenic mice

*Project leader: Prof. Dr. Mathias Jucker*

Funding institution: Koesler

#### Research fellowship, extension

*Project leader: MD Luis Oliveira da Maia*

Funding institution: Ministério da Ciência e de Tecnologia, Lisboa

#### Research fellowship, extension

*Project leader: Lan Ye*

Funding institution: China Scholarship Council

#### Award for medical research

*Project leader: Prof. Dr. Mathias Jucker*

Funding institution: Metlife Foundation, USA

#### 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)

## Awards

### Prof. Dr. Mathias Jucker

Teaching Award Graduate School of Molecular and Cellular Neuroscience 2014  
and  
MetLife Foundation Award for Medical Research 2014

## PhD Theses

(Completed in 2014)

Götz Heilbronner

**Prion-like aspects of  $\beta$ -amyloid aggregation: Seeded strain-like propagation of  $\beta$ -amyloid morphotypes and peripheral transmission of cerebral  $\beta$ -amyloidosis in APP transgenic mice**

*Supervisor: Prof. Dr. Mathias Jucker*

## Diploma/Master Theses

(Completed in 2014)

Julia Stolz

**The impact of murine A $\beta$  on amyloid deposition in transgenic mouse models of cerebral  $\beta$ -amyloidosis**

*Supervisor: Prof. Dr. Mathias Jucker*

Andrew Youssef

**Investigation of in-vitro phagocytic properties of microglia and microglial phagocytosis and morphology in an Alzheimer disease mouse model**

*Supervisor: Dr. Jonas Neher*

## Student Training

### LECTURES

(Summer Term/Winter Term)

#### Genetic and molecular basis of neural diseases I

*Prof. Dr. Mathias Jucker, Dr. Frank Baumann et al.*

#### Cellular and molecular neuroscience

*Dr. Frank Baumann et al.*

#### Neuroglia

*Dr. Jonas Neher et al.*

#### Cell imaging techniques

*Dr. Angelos Skodras et al.*

### LAB ROTATIONS

*Dr. Frank Baumann*

## Conferences & Workshops

#### Organotypic slice cultures to study neurodegenerative disease

17.10.2014

*Scientific Coordinator: Prof. Dr. Mathias Jucker*

## Guest Researchers

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

*Host: Prof. Dr. Mathias Jucker*



# Physiology of Learning and Memory

## Clinical and Scientific Staff

### HEAD OF THE RESEARCH GROUP

Dr. Ingrid Ehrlich

### SCIENTISTS/RESIDENTS

Dr. Daniel Bosch  
Dr. Irene Melo

### TECHNICAL STAFF/ADMINISTRATION

Andrea Gall

### PHD DOCTORAL STUDENTS

Douglas Asede  
Cora Hübner (until 4/2014)  
Stephanie Knapp (since 5/2014)

### MEDICAL DOCTORAL STUDENTS

Anna Gärtner

Independent  
Research  
Groups



## Third-Party Funding

### ONGOING GRANTS

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

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

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

#### **The role of sleep in the consolidation of fear extinction memory**

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

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

#### **Anatomical basis of Fear: Morphological characterization of amygdala intercalated cells based on projection patterns and postsynaptic partners**

*Project leader: Anna Gärtner, Dr. Ingrid Ehrlich*

Funding institution: Interdisciplinary Center for Clinical Research (IZKF), Promotionskolleg, University of Tübingen

## Student Training

### LECTURES

(Summer Term/Winter Term)

#### **Molecular and cellular basis of learning and memory**

*Dr. Ingrid Ehrlich (coordinator), Dr. Daniel Bosch*

#### **Lecture series: Basic Neurobiology for students of Molecular Medicine**

*Dr. Ingrid Ehrlich (Coordinator: Prof. Dr. Thomas Gasser)*

#### **Lecture series: Interdisciplinary Center for Clinical Research (IZKF), Post Grad Programme**

*Dr. Ingrid Ehrlich (Coordinator: Prof. Dr. Marlies Knipper)*

### SEMINARS AND COURSES

(Summer Term/Winter Term)

#### **Neurophysiology for students of Medicine, Dentistry and Molecular Medicine**

*Dr. Ingrid Ehrlich (Coordinator: Prof. Dr. Olga Garaschuk)*

#### **CIN/HH Electrophysiology Journal Club**

*Dr. Ingrid Ehrlich, Dr. Snezana Maljevic*

## Conferences & Workshops

#### **German American Frontiers in Science Meeting (Irvine, California, USA) Member of the organizing committee 2014**

*Scientific Coordinators: Dr. Ingrid Ehrlich, Alexander von Humboldt Foundation, National Academy of Science, USA*

# Neuroregeneration and Repair

## Clinical and Scientific Staff

### HEAD OF THE RESEARCH GROUP

Dr. Simone Di Giovanni

### SCIENTISTS/RESIDENTS

Francesco De Virgiliis  
Mohamed Elnaggar  
Dr. Kirsi Forsberg  
Marilia Grando Soria  
Renee Hartig  
Franziska Hoppe  
Gizem Inak  
Guiping Kong  
Radhika Puttagunta  
Giorgia Quadrato  
Luming Zhou

## Third-Party Funding

### ONGOING GRANTS

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

*Project leader: Dr. Simone Di Giovanni*

Funding institution: German Research Foundation (DFG)

**PCAF-dependent regulation of axonal regeneration after spinal cord injury**

*Project leader: Dr. Simone Di Giovanni*

Funding institution: Wings for Life Foundation

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

*Project leader: Dr. Simone Di Giovanni*

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

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

*Project leader: Dr. Simone Di Giovanni*

Funding institution: German Research Foundation (DFG)

## PhD Theses

(Completed in 2014)

Yashashree Joshi

**The role of p53 after spinal cord injury**

Ricco Lindner

**Epigenetic regulation of axonal regeneration**

## Student Training

Renee Hartig  
Francesco De Virgiliis  
Franziska Hoppe

# Synaptic Plasticity

## Clinical and Scientific Staff

### HEAD OF THE RESEARCH GROUP

Dr. Tobias Rasse (until 02/2014)  
Dr. Jeannine Kern (Acting head)

### SCIENTISTS/RESIDENTS

Shabab Hannan  
Ann-Christin Krahl (until 02/2014)  
Carola Schneider  
Vrinda Sreekumar  
Dr. Natalia Veresceaghina (until 03/2014)  
Jun-yi Zhu (until 08/2014)

## Third-Party Funding

### ONGOING GRANTS

**Characterizing the role of fluglotse's FHA domain**  
*Project leader: Dr. Tobias Rasse*  
Funding institution: German Research Foundation (DFG)

**Synaptic lack of ATP: molecular cause of SPG10?**  
*Project leader: Dr. Tobias Rasse*  
Funding institution: Fritz Thyssen Foundation

## PhD Theses

(Completed in 2014)

Jun-yi Zhu  
**Dissecting the role of mitochondrial heat shock protein, Mortalin, in Parkinson's disease pathology: Drosophila model**  
*Supervisor: PD Dr. Bernard Moussian*

## Diploma/Master Theses

(Completed in 2014)

Ann-Christin Krahl  
**Function of the chaperone Mortalin / Hspa9b in Drosophila melanogaster and Danio rerio**  
*Supervisor: PD Dr. Bernard Moussian*



# Publications in 2014

# List of Publications in 2014

(In alphabetical order)

## Peer Reviewed Articles

- Ackermann H**, Hage SR, Ziegler W (2014). Brain mechanisms of acoustic communication in humans and nonhuman primates: An evolutionary perspective. *The Behavioral and brain sciences* 37(6): 529-46.
- Alcalay RN, Aasly J, **Berg D**, Bressman S, Brice A, **Brockmann K**, Chan P, Clark L, Cormier F, Corvol JC, Durr A, Facheris M, Farrer M, Foroud TM, **Gasser T**, Giladi N, Halter C, Lang A, Langston JW, Marras C, Marti-Masso JF, Ruiz Martinez J, Mejia-Santana H, Mirelman A, Pont-Sunyer C, Orr-Urtreger A, Raymond D, Saunders-Pullman R, Schüle B, Tanner C, Tolosa E, Urkowitz A, Vilas D, Wise A, Marder K, Michael J. Fox Foundation, LRRK2 Consortium: geographical differences in returning genetic research data to study participants. *Genet Med.* 2014; 16(8): 644-645.
- Atabaki A, **Marciniak K**, **Dicke PW**, **Karnath H-O**, **Thier P**; Parietal BOLD response evoked by covert visual search reflects set-size effect in monkeys. *European Journal of Neuroscience.* 2014; 39: 832-840
- Avidan N, Le Panse R, Harbo HF, Bernasconi P, Poulas K, Ginzburg E, Cavalcante P, Colleoni L, Baggi F, Antozzi C, Truffault F, Horn-Saban S, Poschel S, Zagoriti Z, Maniaol A, Lie BA, Bernard I, Saoudi A, Illes Z, Casasnovas Pons C, **Melms A**, Tzartos S, Willcox N, Kostera-Pruszczyk A, Tallaksen C, Mantegazza R, Berrih-Aknin S, Miller A (2014). VAV1 and BAFF, via NFkappaB pathway, are genetic risk factors for myasthenia gravis. *Ann Clin Transl Neurol.* 1: 329-339
- Baier B, Vucurevic G, Müller-Forell W, Glassl O, Geber C, Müller N, Dieterich M, **Karnath H-O**; Anosognosia for hemiparesis after left-sided stroke. *Cortex.* 2014; 61: 120-126
- Balslev D, Odoj B, **Rennig J**, **Karnath H-O**; Abnormal center-periphery gradient in spatial attention in simultanagnosia. *Journal of Cognitive Neuroscience.* 2014; 26: 2778-2788
- Bauer R, Fels M, Vukelic M, **Ziemann U**, Gharabaghi A (2014). Bridging the gap between motor imagery and motor execution with a brain-robot interface. *NeuroImage* (in press, doi: 10.1016/j.neuroimage.2014.12.026)
- Beilina A, Rudenko IN, Kaganovich A, Civiero L, Chau H, Kalia SK, Kalia LV, Lobbetael E, Chia R, Ndukwe K, Ding J, Nalls MA; **International Parkinson's Disease Genomics Consortium**; North American Brain Expression Consortium, Olszewski M, Hauser DN, Kumaran R, Lozano AM, Baekelandt V, Greene LE, Taymans JM, Greggio E, Cookson MR. Unbiased screen for interactors of leucine-rich repeat kinase 2 supports a common pathway for sporadic and familial Parkinson disease. *Proc Natl Acad Sci U S A.* 2014 Feb 18; 111(7): 2626-31.
- Bender B, Heine C, Danz S, **Bischof F**, Reimann K, Bender M, Nagele T, Ernemann U, Korn A (2014). Diffusion restriction of the optic nerve in patients with acute visual deficit. *Journal of magnetic resonance imaging* 40(2): 334-40
- Bender B, Klose U, Lindig T, **Biskup S**, Nägele T, **Schöls L**, Karle KN. Imaging features in conventional MRI, spectroscopy and diffusion weighted images of hereditary diffuse leukoencephalopathy with axonal spheroids (HDLs). *J Neurol.* 2014; 261(12) 2351-9.
- Benzinger P, Rapp K, **Maetzler W**, König HH, Jaensch A, Klenk J, Buchele G; Risk for Femoral Fractures in Parkinson's Disease Patients with and without Severe Functional Impairment. *PLOS ONE*, e97073, MAY 2014
- Berg D**, Postuma RB, Bloem B, Chan P, Dubois B, **Gasser T**, Goetz CG, Halliday GM, Hardy J, Lang AE, Litvan I, Marek K, Obeso J, Oertel W, Olanow CW, Poewe W, Stern M, Deuschl G. Time to redefine PD? Introductory statement of the MDS Task Force on the definition of Parkinson's disease. *Mov Disord.* 2014 Apr; 29(4): 454-6
- Bisdas S, **Braun C**, Skardelly M, Schittenhelm J, Teo TH, Thng CH, Klose U, Koh TS (2014). Correlative assessment of tumor microcirculation using contrast-enhanced perfusion MRI and intravoxel incoherent motion diffusion-weighted MRI: is there a link between them? *NMR in biomedicine* 27(10): 1184-91

- Boesch S, Nachbauer W, Mariotti C, Sacca F, Filla A, Klockgether T, Klopstock T, **Schöls L**, Jacobi H, Buchner B, vom Hagen J, Nanetti L, Manicom K; Safety and Tolerability of Carbamylated Erythropoietin in Friedreich's Ataxia. *Mov Disord.* 2014 Jun; 29: 935-939
- Bonifert T, Karle KN, Tonagel F, Batra M, Wilhelm C, **Theurer Y**, Schoenfeld C, Kluba T, Kamenisch Y, Carelli V, **Wolf J**, Gonzalez MA, Speziani F, **Schüle R**, Zuchner S, **Schöls L**, Wissinger B, **Synofzik M**. Pure and syndromic optic atrophy explained by deep intronic OPA1 mutations and an intralocus modifier. *Brain* 2014; 137: 2164-2177
- Borchers S, Verheij R, Smeets JBJ, **Himmelbach M**; The influence of object height on maximum grip aperture in empirical and modelled data. *Journal of Experimental Psychology: Human Perception and Performance.* 2014; 40: 889-896
- Borst O, Schaub M, Walker B, Sauter M, Muenzer P, Gramlich M, Mueller K, Geisler T, Lang F, Klingel K, Kandolf R, Bigalke B, Gawaz M, **Zuern CS** (2014). CXCL16 is a novel diagnostic marker and predictor of mortality in inflammatory cardiomyopathy and heart failure. *Int J Cardiol* 176(3): 896-903
- Bötzel K, Tronnier V, **Gasser T**; Differenzialdiagnose und Therapie des Tremors. *Deutsches Ärzteblatt.* 2014 März 28; 111(13)
- Bozi M, Papadimitriou D, Antonellou R, Moraitou M, Maniati M, Vassilatis DK, Papageorgiou SG, Leonardos A, Tagaris G, Malamis G, Theofilopoulos D, Kamakari S, Stamboulis E, Hadjigeorgiou GM, Athanassiadou A, Michelakakis H, Papadimitriou A, **Gasser T**, Stefanis L; Genetic assessment of familial and early-onset Parkinson's disease in a Greek population. *Eur J Neurol.* 2014; 21(7): 963-968
- Bras J, Guerreiro R, Darwent L, Parkkinen L, Ansorge O, Escott-Price V, Hernandez DG, Nalls MA, Clark LN, Honig LS, Marder K, Van Der Flier WM, Lemstra A, Scheltens P, Rogaeva E, St George-Hyslop P, Londos E, Zetterberg H, Ortega-Cubero S, Pastor P, Ferman TJ, Graff-Radford NR, Ross OA, Barber I, Braae A, Brown K, Morgan K, **Maetzler W**, **Berg D**, Troakes C, Al-Sarraj S, Lashley T, Compta Y, Revesz T, Lees A, Cairns N, Halliday GM, Mann D, Pickering-Brown S, Dickson DW, Singleton A, Hardy J; Genetic analysis implicates APOE, SNCA and suggests lysosomal dysfunction in the etiology of Dementia with Lewy Bodies. *Hum Mol Genet.* 2014 Dec 1; 23(23): 6139-46
- Brendel B, **Synofzik M**, Ackermann H, Lindig T, Scholderle T, **Schoels L**, Ziegler W; Comparing speech characteristics in spinocerebellar ataxias type 3 and type 6 with Friedreich ataxia. *J Neurol.* 2015; 262(1) 21-6 [Epub ahead of print 2014]
- Brendel B**, Synofzik M, **Ackermann H**, Lindig T, Scholderle T, Schöls L, Ziegler W (2015) Comparing speech characteristics in spinocerebellar ataxias type 3 and type 6 with Friedreich ataxia. *Journal of Neurology* 262(1): 21-6
- Brockmann K**, **Berg D**; The significance of GBA for Parkinson's disease. *J Inherit Metab Dis.* 2014 Jul; 37(4): 643-8
- Brockmann K**, **Srulijes K**, **Pfleiderer S**, **Hauser AK**, **Schulte C**, **Maetzler W**, **Gasser T**, **Berg D**; GBA-associated Parkinson's disease: Reduced survival and more rapid progression in a prospective longitudinal study. *Mov Disord.* 2014 Dec 1. doi: 10.1002/mds.26071. [Epub ahead of print]

- Brownstein CA, Beggs AH, Homer N, Merriman B, Yu TW, Flannery KC, Dechene ET, Towne MC, Savage SK, Price EN, Holm IA, Luquette LJ, Lyon E, Majzoub J, Neupert P, McCallie D Jr, Szolovits P, Willard HF, Mendelsohn NJ, Temme R, Finkel RS, Yum SW, Medne L, Sunyaev SR, Adzhubey I, Cassa CA, de Bakker PI, Duzkale H, Dworzny Ski P, Fairbrother W, Francioli L, Funke BH, Giovanni MA, Handsaker RE, Lage K, Lebo MS, Lek M, Leshchiner I, Macarthur DG, McLaughlin HM, Murray MF, Pers TH, Polak PP, Raychaudhuri S, Rehm HL, Soemedi R, Stitzel NO, Vestrecka S, Supper J, Gugenmus C, Klocke B, Hahn A, Schubach M, Menzel M, **Biskup S**, Freisinger P, Deng M, Braun M, Perner S, Smith RJ, Andorf JL, Huang J, Ryckman K, Sheffield VC, Stone EM, Bair T, Black-Ziegelbein EA, Braun TA, Darbro B, Deluca AP, Kolbe DL, Scheetz TE, Shearer AE, Sompallae R, Wang K, Bassuk AG, Edens E, Mathews K, Moore SA, Shchelochkov OA, Trapane P, Bossler A, Campbell CA, Heusel JW, Kwitek A, Maga T, Panzer K, Wassink T, Van Daele D, Azaiez H, Booth K, Meyer N, Segal MM, Williams MS, Tromp G, White P, Corsmeier D, Fitzgerald-Butt S, Herman G, Lamb-Thrush D, McBride KL, Newsom D, Pierson CR, Rakowsky AT, Maver A, Lovre I L, Palanda I A, Peterlin B, Torkamani A, Wedell A, Huss M, Alexeyenko A, Lindvall JM, Magnusson M, Nilsson D, Stranneheim H, Taylan F, Gilissen C, Hoischen A, van Bon B, Yntema H, Nelen M, Zhang W, Sager J, Zhang L, Blair K, Kural D, Cariaso M, Lennon GG, Javed A, Agrawal S, Ng PC, Sandhu KS, Krishna S, Veeramachaneni V, Isakov O, Halperin E, Friedman E, Shomron N, Glusman G, Roach JC, Caballero J, Cox HC, Mauldin D, Ament SA, Rowen L, Richards DR, Lucas FA, Gonzalez-Garay ML, Caskey CT, Bai Y, Huang Y, Fang F, Zhang Y, Wang Z, Barrera J, Garcia-Lobo JM, González-Lamuño D, Llorca J, Rodriguez MC, Varela I, Reese MG, De La Vega FM, Kiruluta E, Cargill M, Hart RK, Sorenson JM, Lyon GJ, Stevenson DA, Bray BE, Moore BM, Eilbeck K, Yandell M, Zhao H, Hou L, Chen X, Yan X, Chen M, Li C, Yang C, Gunel M, Li P, Kong Y, Alexander AC, Albertyn ZI, Boycott KM, Bulman DE, Gordon PM, Innes AM, Knoppers BM, Majewski J, Marshall CR, Parboosingh JS, Sawyer SL, Samuels ME, Schwartzentruber J, Kohane IS, Margulies DM. An international effort towards developing standards for best practices in analysis, interpretation and reporting of clinical genome sequencing results in the CLARITY Challenge. *Genome Biol.* 2014 Mar 25; 15(3): R53.
- Brueckner F, Kohl B, Puest B, Gassner S, Osseforth J, Lindenau M, Stodieck S, **Biskup S**, **Lohmann E**. Unusual variability of PRRT2 linked phenotypes within a family. *Eur J Paediatr Neurol.* 2014 Jul; 18(4): 540-2. doi: 10.1016/j.ejpn.2014.03.012.
- Buerk K, Kaiser FJ, Tennstedt S, **Schoels L**, Kreuz FR, Wieland T, Stromf TM, Buettner T, Hollstein R, Braunholz D, Plaschke J, Gillessen-Kaesbach G, Zuehlke C; A novel missense mutation in CACNA1A evaluated by in silico protein modeling is associated with non-episodic spinocerebellar ataxia with slow progression. *Eur J Med Genet.* 2014; 207-211
- Burbulla LF, **Fitzgerald J**, **Stegen K**, Westermeier J, Thost AK, Kato H, Mokranjac D, Sauerwald J, Martins LM, Woitalla D, Rapaport D, Riess O, Proikas-Cezanne T, **Rasse TM**, **Krüger R**. Mitochondrial proteolytic stress induced by loss of mortalin function is rescued by Parkin and PINK1. *Cell Death & Disease* 2014; 17; 5: e1180
- Caballero Oteyza A**, Battaloglu E, Ocek L, Lindig T, Reichbauer J, Rebelo AP, Gonzalez MA, Zorlu Y, Ozes B, Timmann D, Bender B, Woehlke G, Zuchner S, **Schöls L** and **Schüle R**; Motor protein mutations cause a new form of hereditary spastic paraplegia. *Neurology.* 2014 Jun 3; 82(22): 2007-16
- Caesar M, Felk S, Zach S, Brønstad G, Aasly JO, **Gasser T**, Gillardon F. Changes in matrix metalloprotease activity and progranulin levels may contribute to the pathophysiological function of mutant leucine-rich repeat kinase 2. *Glia.* 2014 Mar 20. 62(7): 1075-1092
- Caggiano V, **Giese M**, **Thier P**, Casile A; Encoding of point of view during action observation in the Local Field Potentials of macaque area F5. *European Journal of Neuroscience.* 2014; doi: 10.1111/ejn.12793. [Epub ahead of print]
- Casadei N, Pöhler AN, Tomas-Zapico C, Torres-Peraza J, Schwedhelm I, Witz A, Zamolo I, Mellace M, Spruijt B, Klucken J, Lucas J, **Kahle P**, **Krüger R**, Riess O, Nuber S; Overexpression of synphilin-1 promotes clearance of soluble and misfolded alpha-synuclein in vivo and delays the motor phenotype in A30P transgenic mice. *Hum Mol Genet.* 2014; 23: 767-781

- Cash RFH, Murakami T, Chen R, Thickbroom G, **Ziemann U** (2014). Augmenting plasticity-induction in human motor cortex by disinhibition stimulation (DIS). *Cereb Cortex* (in press, doi: 10.1093/cercor/bhu176)
- Chakrabarti S, Schwarz C**; Studying motor cortex function using the rodent vibrissal system. *e-Neuroforum*. 2014; 5: 20-27. doi: 10.1007/s13295-014-0051-y
- Challal S, Buenafe OE, Queiroz EF, **Maljevic S**, Marcourt L, **Bock M**, Kloeti W, Dayrit FM, Harvey AL, **Lerche H**, Esguerra CV, de Witte PA, Wolfender JL, Crawford AD (2014). Zebrafish bioassay-guided microfractionation identifies anticonvulsant steroid glycosides from the Philippine medicinal plant *Solanum torvum*. *ACS Chem Neurosci* 5: 993-1004.
- Christensen A, **Giese MA, Sultan F**, Müller O, Goericke S, **Ilg W**, Timmann D; An intact action-perception coupling depends on the integrity of the cerebellum. *Journal of Neuroscience*. 2014; 34(19): 6707-6716
- Chung S, Ahlskog J, Anderson K, Armasu SM, Biernacka JM, Cunningham JM, Frigerio R, Aasly JO, Annesi G, Bentivoglio AR, Brighina L, Chartier-Harlin MC, Goldwurm S, Hadjigeorgiou G, Jasinska-Myga B, Jeon BS, Kim YJ, **Krüger R**, Lesage S, Markopoulou K, Mellick G, Morrison KE, Puschmann A, Tan EK, Theuns J, Wirdefeldt K, Wszolek Z, Farrer MJ, Maraganore DM on behalf of the Genetic Epidemiology of Parkinson's Disease Consortium. Alpha-synuclein REP1 variants and survival free of death in Parkinson's disease. *Movement Disorders* 2014 doi: 10.1002/mds.25841; [Epub ahead of print]
- Daddaoua N, **Dicke PW, Thier P**; Eye position information is used to compensate the consequences of ocular torsion on V1 receptive fields. *Nature Communications*. 2014; 5: 3047. doi: 10.1038/ncomms4047
- Dash S, **Thier P**; Cerebellum-dependent motor learning: lessons from adaptation of eye movements in primates. *Progress in Brain Research*. 2014; 210: 121-55
- Dayan E, Stella I, **Mukovskiy A**, Douek Y, **Giese MA**, Malach R, Flash T; The Default mode network differentiates biological from non-biological motion. *Cerebral Cortex*. 2014; doi: 10.1093/cercor/bhu199.e pub
- Diedler J**, Santos E, **Poli S**, Sykora M (2014). Optimal cerebral perfusion pressure in patients with intracerebral hemorrhage: an observational case series. *Critical care* 18: R51
- Diepenbroek M, Casadei N, Esmer H, Saido TC, Takano J, **Kahle PJ**, Nixon RA, Rao MV, Melki R, Pieri L, Helling S, Marcus K, **Krüger R**, Masliah E, Riess O, Nuber S; Calpain-specific Inhibitor calpastatin modulates human alpha-synuclein processing and synaptic plasticity in transgenic mouse brain. *Hum Mol Genet*. 2014 (in press)
- Döcker D, Schubach M, Menzel M, **Munz M**, Spaich C, **Biskup S**, Bartholdi D. Further delineation of the SATB2 phenotype. *Eur J Hum Genet*. 2014 Aug; 22(8): 1034-9. doi: 10.1038/ejhg
- Döcker D, Schubach M, Menzel M, Spaich C, Gabriel HD, Zenker M, Bartholdi D, **Biskup S**. Germline PTPN11 and somatic PIK3CA variant in a boy with megalencephaly-capillary malformation syndrome (MCAP) – pure coincidence? *Eur J Hum Genet*. 2014 Jun 18. doi: 10.1038/ejhg.2014.118
- Dong J, Gao J, Nalls M, Gao X, Huang X, Han J, Singleton AB, Chen H; **International Parkinson's Disease Genomics Consortium (IPDGC)**. Susceptibility loci for pigmentation and melanoma in relation to Parkinson's disease. *Neurobiol Aging*. 2014 Jun; 35(6): 1512.e5-10
- Doolittle EL, Gingras B, **Endres D**, Fitch WT; Overtone-based pitch selection in hermit thrush song: Unexpected convergence with scale construction in human music. *PNAS*. 2014; 111(46): 16616-16621
- Doss S, Wandinger KP, Hyman BT, Panzer JA, **Synofzik M**, Dickerson B, Mollenhauer B, Scherzer CR, Iverson AJ, Finke C, **Schöls L, Müller Vom Hagen J**, Trenkwalder C, Jahn H, Höltje M, Biswal BB, Harms L, Ruprecht K, Buchert R, Höglinger GU, Oertel WH, Unger MM, Körtvélyessy P, Bittner D, Priller J, Spruth EJ, Paul F, Meisel A, Lynch DR, Dirnagl U, Endres M, Teegen B, Probst C, Komorowski L, Stöcker W, Dalmau J, Prüss H. High prevalence of NMDA receptor IgA/IgM antibodies in different dementia types. *Ann Clin Transl Neurol*. 2014 Oct; 1(10): 822-32



- Eick C, Rizas KD, **Zuern CS**, Bauer A (2014). Automated assessment of cardiac autonomic function by means of deceleration capacity from noisy, nonstationary ECG signals: validation study. *Ann Noninvasive Electrocardiol* 19(2): 122-128
- Eisele G, Wick A, Eisele AC, Clement PM, Tonn J, **Tabatabai G**, Ochsenbein A, Schlegel U, Neyns B, Krex D, Simon M, Nikkhah G, Picard M, Stupp R, Wick W, Weller M (2014). Cilengitide treatment of newly diagnosed glioblastoma patients does not alter patterns of progression. *J Neurooncol.* 117: 141-145
- Eisele YS, Fritschi SK, Hamaguchi T, Obermüller U, Füger P, Skodras A, Schäfer C, Odenthal J**, Heikenwalder M, **Staufenbiel M, Jucker M** (2014). Multiple factors contribute to the peripheral induction of cerebral  $\beta$ -amyloidosis. *J Neurosci* 34: 10264-73
- Engelholm M, Sekler J, Schöndorf DC**, Arora V, Schittenhelm J, **Biskup S**, Schell C, **Gasser T**. A novel mutation in LRSAM1 causes axonal Charcot-Marie-Tooth disease with dominant inheritance. *BMC Neurol.* 2014 Jun 3; 14(1): 118. doi: 10.1186/1471-2377-14-118
- Euro EPINOMICS RES Consortium**, Epilepsy Phenome/Genome P, Epi KC (2014). De novo mutations in synaptic transmission genes including DNMT1 cause epileptic encephalopathies. *Am J Hum Genet.* 95: 360-370.
- Faletta F, D'Adamo AP, Bruno I, Athanasakis E, **Biskup S**, Esposito L, Gasparini P. Autosomal recessive Stickler syndrome due to a loss of function mutation in the COL9A3 gene. *Am J Med Genet A.* 2014 Jan; 164A(1): 42-7
- Focke NK**, Diederich C, Helms G, Nitsche MA, **Lerche H**, Paulus W (2014). Idiopathic-generalized epilepsy shows profound white matter diffusion-tensor imaging alterations. *Hum Brain Mapp.* 35: 3332-3342.
- Fonteyn EMR, Keus SHJ, Verstappen CCP, **Schöls L**, de Groot IJM, van de Warrenburg BPC. The effectiveness of allied health care in patients with ataxia: a systematic review. *J. Nerol.* 2014 Feb, 261 (2): 251-258
- Fritschi SK**, Cintron A, **Ye L, Mahler J, Bühler A, Baumann F**, Neumann M, Nilsson KPR, Hammarström P, Walker LC, **Jucker M** (2014). A $\beta$  seeds resist inactivation by formaldehyde. *Acta Neuropathol* 128: 477-84
- Fritschi SK\*, Langer F\*, Kaeser SA, Maia L**, Portelius E, Pinotsi D, Kaminski CF, Winkler DT, **Maetzler W**, Keyvani K, Spitzer P, Wiltfang J, Kaminski Schierle GS, Zetterberg H, **Staufenbiel M, Jucker M** (2014). Highly potent soluble amyloid- $\beta$  seeds in human Alzheimer brain but not cerebrospinal fluid. *Brain* 2014; 137: 2909-15 (*\*equally contributed*)
- Furtner J, Bender B, **Braun C**, Schittenhelm J, Skardelly M, Ernemann U, Bisdas S. 2014. Prognostic value of blood flow measurements using arterial spin labeling in gliomas. *PLoS one.* 9: e99616
- Gadzicki D, Döcker D, Schubach M, Menzel M, Schmorl B, Stellmer F, **Biskup S**, Bartholdi D. Expanding the phenotype of a recurrent de novo variant in PACS1 causing intellectual disability. *Clin Genet.* 2014 Dec 18.
- Gaenslen A, Wurster I, Brockmann K**, Huber H, Godau J, **Faust B, Lerche S**, Eschweiler GW, **Maetzler W, Berg D**. Prodromal features for Parkinson's disease - baseline data from the TREND study. *Eur J Neurol.* 2014 May; 21(5): 766-72
- Ganos C, **Biskup S, Krüger S**, Meyer-Osores A, Hodecker S, Hagel C, **Schöls L**, Bhatia KP, Münchau A. Dystonia with aponia, slow horizontal saccades, epilepsy and photic myoclonus: a novel syndrome? *Parkinsonism Relat Disord.* 2014 Mar; 20(3): 328-31
- Gasperi C, **Melms A**, Schoser B, Zhang Y, Meltoranta J, Risson V, Schaeffer L, Schalke B, Kroger S (2014). Anti-agrin autoantibodies in myasthenia gravis. *Neurology* 82(22): 1976-83
- Geisler S**, Vollmer S, **Golombek S**, and **Kahle PJ**. UBE2N, UBE2L3 and UBE2D2/3 ubiquitin-conjugating enzymes are essential for parkin-dependent mitophagy. *J. Cell Sci.* 2014; 127, 3280-3293
- Gentsch A, **Synofzik M**. Affective coding: the emotional dimension of agency. *Frontiers in human neuroscience* 8: 608. *Front Hum Neurosci.* 2014 Aug 12; 8: 608
- Georgieva P**, Brugger D, **Schwarz C**; Are spatial frequency cues used for whisker-based active discrimination? *Frontiers in Behavioral Neuroscience.* 2014; 8: 379. doi: 10.3389/fnbeh.2014.00379

- Gharabaghi A, Kraus D, Leao MT, Spüler M, Walter A, Bogdan M, Rosenstiel W, Naros G, **Ziemann U** (2014). Coupling brain-machine interfaces with cortical stimulation for brain-state dependent stimulation: enhancing motor cortex excitability for neurorehabilitation. *Front Hum Neurosci* 8: 122
- Giese MA**; Mirror representations innate versus determined by experience: A viewpoint from learning theory. *Behavioral and Brain Sciences*. 2014; 37(2): 201-202
- Goldsworthy M, **Müller-Dahlhaus F**, Ridding MC, **Ziemann U** (2014). Resistant against de-depression: LTD-like plasticity in the human motor cortex induced by spaced cTBS. *Cereb Cortex* (in press, doi: 10.1093/cercor/bht353)
- Goldsworthy MR, **Müller-Dahlhaus F**, Ridding MC, **Ziemann U** (2014). Inter-subject variability of LTD-like plasticity in human motor cortex: a matter of preceding motor activation. *Brain Stimul* 7(6): 864-70
- Gowert NS, Donner L, Chatterjee M, **Eisele YS**, Towhid ST, Münzer P, Walker B, Ogorek I, Borst O, Grandoch M, Schaller M, Fischer JW, Gawaz M, Weggen S, Lang F, **Jucker M**, Elvers M (2014). Blood platelets in the progression of Alzheimer's disease. *PLoS One* 9: e90523
- Graber S, Liepelt-Scarfione I, Csoti I, Maetzler W, **Sultan F**, Berg D; Post-cueing deficits with maintained cueing benefits in patients with Parkinson's disease dementia. *Frontiers in Neurology* 5: 1-6
- Gräber S, **Liepelt-Scarfione I**, Csoti I, **Maetzler W**, Sultan F, **Berg D**. Post-Cueing Deficits with Maintained Cueing Benefits in Patients with Parkinson's Disease Dementia. *Front Neurol*. 2014 Nov 17; 5: 236
- Grau T, Burbulla L, Engl G, Oexle K, Leo-Kottler B, Roscioli T, **Krüger R**, Rapaport D, Wissinger B, Schimpf-Linzenbold S. A novel heterozygous OPA3 mutation located in the mitochondrial leader sequence results in an altered mitochondrial translocation and a fragmented mitochondrial network. *J Med Genet* 2014 50: 848-858
- Hagen K, Ehlis AC, Haeussinger FB, Beeretz S, Kromer GV, **Heinzel S**, **Maetzler W**, Eschweiler GW, **Berg D**, Fallgatter AJ, Metzger FG; The TREND Study Consortium. The relation of SMI and the VSEP in a risk sample for neurodegenerative disorders. *J Neural Transm*. 2014 Dec 18. [Epub ahead of print]
- Hallmann K, Zsurka G, Moskau-Hartmann S, Kirschner J, Korinthenberg R, Ruppert AK, Ozdemir O, **Weber Y**, **Becker F**, **Lerche H**, Elger CE, Thiele H, Nurnberg P, Sander T, Kunz WS (2014). A homozygous splice-site mutation in CARS2 is associated with progressive myoclonic epilepsy. *Neurology* 83: 2183-2187.
- Hamada M, Galea J, Di Lazzaro V, Mazzone P, **Ziemann U**, Rothwell J (2014). Two distinct interneuron circuits in human motor cortex are linked to different subsets of physiological and behavioral plasticity. *J Neurosci* 34, 12837-12849
- Hamodeh S**, Baizer J, Sugihara I, **Sultan F**; Systematic analysis of neuronal wiring of the rodent deep cerebellar nuclei reveals differences reflecting adaptations at the neuronal circuit and internuclear level. *Journal of Comparative Neurology*. 2014; 522: 2481-97
- Hans F**, Fiesel FC, Strong JC, **Jäckel S**, **Rasse TM**, **Geisler S**, Springer W, Schulz JB, Voigt A and **Kahle PJ**. UBE2E ubiquitin-conjugating enzymes and ubiquitin isopeptidase Y regulate TDP-43 protein ubiquitination. *J. Biol. Chem*. 2014; 289, 19164-19179
- Hardies K, May P, Djémié T, Tarta-Arsene O, Deconinck T, Craiu D; AR working group of the **EuroEPINOMICS RES Consortium**, Helbig I, Suls A, Balling R, Weckhuysen S, De Jonghe P, Hirst J. Recessive loss-of-function mutations in AP451 cause mild fever-sensitive seizures, developmental delay and spastic paraplegia through loss of AP-4 complex assembly. *Hum Mol Genet*. 2014 Dec 30. pii: ddu740. [Epub ahead of print]
- Hasmann SE**, **Berg D**, Hobert MA, **Weiss D**, Lindemann U, Streffer J, **Liepelt-Scarfione I**, **Maetzler W**. Instrumented functional reach test differentiates individuals at high risk for Parkinson's disease from controls. *Front Aging Neurosci*. 2014 Oct 24; 6: 286
- Haubrich C, Diehl RR, Kasprovicz M, **Diedler J**, Sorrentino E, Smielewski P, Czosnyka M (2014). Traumatic brain injury: Increasing ICP attenuates respiratory modulations of cerebral blood flow velocity. *Medical engineering & physics* (in press, doi: doi: 10.1016/j.medengphy. 2014.11.009)

- Heckman MG, Soto-Ortolaza AI, Aasly JO, Abahuni N, Annesi G, Bacon JA, Bardien S, Bozi M, Brice A, Brighina L, Van Broeckhoven C, Carr J, Chartier-Harlin MC, Dardiotis E, Dennis W, Dickson MD 2, Diehl NN, Elbaz A, Ferrarese C, Ferraris A, Fiske B, Gibson J, Gibson R, Hadjigeorgiou GM, Hattori N, Ioannidis JPA, Jasinska-Myga B, Jeon BS, Kim YJ, Klein C, **Krüger R**, Kyratzi E, Lesage S, Lin CH, Lynch T, Maraganore DMM, Mellick G, Mutez E, Nilsson C, Opala G, Park SS, Puschmann A, Quattrone A, Sharma M, Silburn PA, Sohn YA, Stefanis L, Tadic J, Theuns J, Tomiyama H, Uitti RJ, Valente EM, van de Loo S, Vassilatis DK, Vilariño-Güell C, White LR, Wirdefelt K, Wszolek ZK, Wu RM, Farrer MJ Ross OA on behalf of the Genetic Epidemiology Of Parkinson's Disease (GEO-PD) consortium. The protective effect of LRRK2 p.R1398H on risk of Parkinson's disease is independent of MAPT and SNCA variants. *Neurobiol Aging* 2014; 35: 266.e5-14
- Hedrich UB**, Liautard C, Kirschenbaum D, Pofahl M, Lavigne J, Liu Y, Theiss S, Slotta J, Escayg A, Dihne M, Beck H, Mantegazza M, **Lerche H** (2014). Impaired action potential initiation in GABAergic interneurons causes hyperexcitable networks in an epileptic mouse model carrying a human Na(V)1.1 mutation. *J Neurosci.*: 34: 14874-14889.
- Hefendehl JK, Neher JJ, Sühs RB**, Kohsaka S, **Skodras A, Jucker M** (2014). Homeostatic and injury-induced microglia behavior in the aging brain. *Aging Cell* 13: 60-9
- Heinzel S**, Gold M, **Deuschle C, Bernhard F, Maetzler W, Berg D**, Dodel R. Naturally Occurring Alpha-Synuclein Autoantibodies in Parkinson's Disease: Sources of (Error) Variance in Biomarker Assays. *PLoS One*. 2014 Dec 3; 9(12): e114566
- Heinzel S, Liepelt-Scarfone I, Roeben B**, Nasi-Kordhishti I, Suenkel U, **Wurster I, Brockmann K**, Fritsche A, Niebler R, Metzger FG, Eschweiler GW, Fallgatter AJ, **Maetzler W, Berg D**. A neurodegenerative vascular burden index and the impact on cognition. *Front Aging Neurosci*. 2014 Jul 9; 6: 161
- Heni M, Schopfer P, Peter A, Sartorius T, Fritsche A, **Synofzik M**, Haring HU, **Maetzler W**, Hennige AM. Evidence for altered transport of insulin across the blood-brain barrier in insulin-resistant humans. *Acta diabetologica*. 2014 Aug; 51 (4): 679-681
- Henning A, Mueller II, Mueller K, **Zuern C**, Walker T, Gawaz M, Schrieck J, Langer HF (2014). Percutaneous Edge-to-Edge Mitral Valve Repair Escorted by Left Atrial Intracardiac Echocardiography (ICE). *Circulation* 130(20): e173-4.
- Herrmann, Willmes-von Hinckeldey K, Sturm W, Wallesch, C-W, **Karnath H-O**, Jaencke L, Muentz T, Fink GR; Clinical Neuropsychology is not a psychological Psychotherapy. *Zeitschrift für Neuropsychologie*. 2014; 25(1): 65-68
- Hobert MA, **Maetzler W**, Aminian K, Chiari L. Technical and clinical view on ambulatory assessment in Parkinson's disease. *Acta Neurol Scand* 2014 Sep; 130(3): 139-47
- Hübner A, Voytovych H, Heidegger T, **Müller-Dahlhaus F, Ziemann U** (2014). Acute effects of lithium on excitability of human motor cortex. *Clinical Neurophysiology* 125(11): 2240-6
- Hübner C, Bosch D, Gall A, Lüthi A, Ehrlich I**. Ex vivo dissection of optogenetically activated mPFC and hippocampal inputs to neurons in the basolateral amygdala: implications for fear and emotional memory. *Front Behav. Neurosci*. 2014 Mar 5; 8: 64.
- Huttenlocher J, **Krüger R**, Capeetian P, **Brockmann K**, Csoti I, Klein C, **Berg D, Gasser T**, Bonin M, Riess O, Bauer P. EIF4G1 is neither a strong nor a common risk factor for Parkinson Disease: Evidence from large European cohorts. *Eur J Hum Genet* 2014 (in press)
- Ilg W**, Bastian AJ, Boesch S, Burciu RG, Celnik P, Claassen J, Feil K, Kalla R, Miyai I, Nachbauer W, **Schöls L**, Strupp M, **Synofzik M**, Teufel J, Timmann D. Consensus paper: management of degenerative cerebellar disorders. *Cerebellum* 2014; 13 (2): 248-268
- Jäckel S, Summerer AK, Thömmes CM, Pan X, Voigt A, Schulz JB, **Rasse TM**, Dormann D, Haass C, Kahle PJ; Nuclear import factor transportin and arginine methyltransferase 1 modify FUS neurotoxicity in *Drosophila*; *Neurobiol Dis*. Epub 2014 Nov 8.
- Karnath H-O**, Smith DV.; The next step in modern brain lesion analysis: multivariate pattern analysis. *Brain*. 2014; 137: 2405-2407

- Kirsten M, Tiemann S, Seibold VC, **Hertrich I**, Beck S, Rolke B (2014). When the polar bear encounters many polar bears: event-related potential context effects evoked by uniqueness failure. *Language, Cognition and Neuroscience* 29: 1147-1162
- Klamer S**, **Eshahabi A**, **Lerche H**, Braun C, Erb M, Scheffler K, **Focke NK**. Differences Between MEG and High-Density EEG Source Localizations Using a Distributed Source Model in Comparison to fMRI. *Brain Topogr.* 2015 Jan; 28(1): 87-94. doi: 10.1007/s10548-014-
- Koch H**, Caughie C, Elsen FP, Doi A, Garcia AJ 3rd, Zanella S, Ramirez JM. Prostaglandin E2 differentially modulates the central control of eupnoea, sighs and gasping in mice. *J Physiol.* 2015 Jan 1; 593(1): 305-19. doi: 10.1113/jphysiol.2014.279794. Epub 2014 Nov 3.
- Kopp B, Rösser N, Tabeling S, Stürenburg HJ, **de Haan B**, **Karnath H-O**, Wessel K.; Disorganized behavior on Link's cube test is sensitive to right hemispheric frontal lobe damage in stroke patients. *Frontiers in Human Neuroscience.* 2014; 8: 79
- Kroczyńska B, Mehrota S, Majchrzak-Kita B, Arslan AD, Altman JK, Stein BL, McMahon B, Kozłowski P, **Kahle PJ**, Eklund EA, Fish EN, and Platanius LC. Regulatory effects of SKAR in interferon- $\alpha$  signaling and its role in the generation of type I IFN responses. *Proc. Natl. Acad. Sci. USA* 2014; 111, 11377-11382
- Krumm P, **Zuern CS**, Wurster TH, Mangold S, Klumpp BD, Henning A, Mueller II, Bretschneider C, Bauer A, Kramer U, May AE (2014). Cardiac magnetic resonance imaging in patients undergoing percutaneous mitral valve repair with the MitraClip system. *Clin Res Cardiol* 103(5): 397-404
- Kuss M**, Adamopoulou E, and **Kahle PJ**. Interferon- $\alpha$  induces leucine-rich repeat kinase LRRK2 via extracellular signal-regulated kinase ERK5 in macrophages. *J. Neurochem.* 2014; 129, 980-987
- Lal D, Reinthaler EM, **Schubert J**, Muhle H, Riesch E, Kluger G, Jabbari K, Kawalia A, Baumel C, Holthausen H, Hahn A, Feucht M, Neophytou B, Haberlandt E, **Becker F**, Altmüller J, Thiele H, Lemke JR, **Lerche H**, Nürnberg P, Sander T, **Weber Y**, Zimprich F, Neubauer BA (2014). DEPDC5 mutations in genetic focal epilepsies of childhood. *Ann Neurol.* 75: 788-792.
- Laske C** (2014). Phase 3 trials of solanezumab and bapineuzumab for Alzheimer's disease. *N Engl J Med* 370: 1459
- Laske C**, Stellos K (2014). Vascular Pathophysiology of Alzheimer's Disease). *Current Alzheimer research* 11: 1-3
- Laske C, Stellos K, Kempter I, Stransky E, **Maetzler W**, Fleming I, Randriamboavonjy V. Increased cerebrospinal fluid calpain activity and microparticle levels in Alzheimer's disease. *Alzheimers Dement.* 2014 Sep 4
- Law BM, Spain VA, Leinster VH, Chia R, Beilina A, Cho HJ, Taymans JM, Urban MK, Sancho RM, Blanca Ramírez M, **Biskup S**, Baekelandt V, Cai H, Cookson MR, Berwick DC, Harvey K. A direct interaction between leucine-rich repeat kinase 2 and specific  $\beta$ -tubulin isoforms regulates tubulin acetylation. *J Biol Chem.* 2014 Jan 10; 289(2): 895-908. doi: 10.1074/jbc.M113.507913
- Layer G, **Giese MA**, Neumann H; Learning representations of animated motion sequences—a neural model. *Top Cognitive Science.* 2014; 6(1): 170-182
- Lemke JR, Hendrickx R, Geider K, Laube B, Schwake M, Harvey RJ, James VM, Pepler A, Steiner I, Hörtnagel K, Neidhardt J, Ruf S, Wolff M, Bartholdi D, Caraballo R, Platzer K, Suls A, De Jonghe P, **Biskup S**, Weckhuysen S. GRIN2B mutations in West syndrome and intellectual disability with focal epilepsy. *Ann Neurol.* 2014 Jan; 75(1): 147-54
- Lenz M, Platschek S, Priesemann V, Becker D, Willems LM, **Ziemann U**, Deller T, **Müller-Dahlhaus F**, Jedlicka P, Vlachos A (2014). Repetitive magnetic stimulation induces plasticity of excitatory postsynapses on proximal dendrites of cultured mouse CA1 pyramidal neurons. *Brain Structure and Function* (in press, doi: 10.1007/s00429-014-0859-9)

- Lerche S, Brockmann K, Wurster I, Gaenslen A, Roeben B, Holz D, Eschweiler GW, Maetzler W, Berg D.** Reasons for mild parkinsonian signs – Which constellation may indicate neurodegeneration? *Parkinsonism Relat Disord.* 2014 Nov 28. pii: S1353-8020(14)00453-2 [Epub ahead of print]
- Lerche S, Hobert M, Brockmann K, Wurster I, Gaenslen A, Hasmann S, Eschweiler GW, Maetzler W, Berg D.** Mild Parkinsonian Signs in the Elderly – Is There an Association with PD? Cross-sectional Findings in 992 Individuals. *PLoS One.* 2014 Mar 27; 9(3): e92878
- Lerche S, Seppi K, Behnke S, Liepelt-Scarfone I, Godau J, Mahlke P, Gaenslen A, Brockmann K, Srujijes K, Huber H, Wurster I, Stockner H, Kiechl S, Willeit J, Gasperi A, Fassbender K, Poewe W, Berg D.** Risk factors and prodromal markers and the development of Parkinson's disease. *J Neurol.* 2014 Jan; 261(1): 180-7
- Levin J, Tiedt S, Arzberger T, **Biskup S**, Schuberth M, Stenglein-Krapf G, Kreth FW, Högen T, la Fougère C, Linn J, van der Knaap MS, Giese A, Kretzschmar HA, Danek A. Diffuse leukoencephalopathy with spheroids: Biopsy findings and a novel mutation. *Clin Neurol Neurosurg.* 2014 Jul;122:113-5. doi: 10.1016/j.clineuro.2014.04.022. [Epub 2014 May 4]
- Li D, Karnath H-O,** Rorden C; Egocentric representations of space co-exist with allocentric representations: evidence from spatial neglect. *Cortex.* 2014; 58: 161-169
- Liepelt-Scarfone I, Lerche S,** Behnke S, Godau J, **Gaenslen A,** Pausch C, Fassbender K, **Brockmann K, Srujijes K,** Huber H, **Wurster I, Berg D.** Clinical characteristics related to worsening of motor function assessed by the Unified Parkinson's Disease Rating Scale in the elderly population. *J Neurol.* 2014 Dec 2. [Epub ahead of print]
- Lindner R, Puttagunta R, Nguyen T, **Di Giovanni S.** DNA methylation temporal profiling following peripheral versus central nervous system axotomy. *Scientific Data* 11 Sept 2014, doi: 10.1038/sdata.2014.38
- Lindström V, Fagerqvist T, Nordström E, Eriksson F, Lord A, Tucker S, Andersson J, Johannesson M, Schell H, **Kahle PJ,** Möller C, Gellerfors P, Bergström J, Lannfelt L, and Ingelsson M. Immunotherapy targeting  $\alpha$ -synuclein protofibrils reduced pathology in (Thy1)-h [A30P]  $\alpha$ -synuclein mice. *Neurobiol. Dis.* 2014; 69, 134-143
- Lohmann K, Schmidt A, Schillert A, Winkler S, Albanese A, Baas F, Bentivoglio AR, Borngräber F, Brüggemann N, Defazio G, Del Sorbo F, Deuschl G, Edwards MJ, **Gasser T,** Gómez-Garre P, Graf J, Groen JL, Grünewald A, Hagenah J, Hemmelmann C, Jabusch HC, Kaji R, Kasten M, Kawakami H, Kostic VS, Liguori M, Mir P, Münchau A, Ricchiuti F, Schreiber S, Siegesmund K, Svetel M, Tijssen MA, Valente EM, Westenberger A, Zeuner KE, Zittel S, Altenmüller E, Ziegler A, Klein C. Genome-Wide Association Study in Musicians Dystonia: A Risk Variant at the Arylsulfatase G Locus?, *Mov Disord.* 2014; 29(7): 921-927
- Louter M, **Maetzler W,** Prinzen J, van Lummel RC, Hobert M, Arends JB, Bloem BR, Streffer J, **Berg D,** Overeem S, **Liepelt-Scarfone I.** Accelerometer-based quantitative analysis of axial nocturnal movements differentiates patients with Parkinson's disease, but not high-risk individuals, from controls. *J Neurol Neurosurg Psychiatry.* 2014 Apr 28. doi: 10.1136/jnnp-2013-306851. [Epub ahead of print]
- Lücke C, Heidegger T, Röhner M, Toennes SW, Krivanekova L, **Müller-Dahlhaus F, Ziemann U** (2014). Deleterious Effects of a Low Amount of Ethanol on LTP-Like Plasticity in Human Cortex. *Neuropsychopharmacology* 39: 1508-1518
- Lutz UC, Sirfy A, Wiatr G, Altpass D, Farger G, **Gasser T,** Karle KN, Batra A. Mencacci: Clozapine serum concentrations in dopaminergic psychosis in Parkinson's disease and related disorders. *Eur J Clin Pharmacol.* 2014; 70(12): 1471-1476
- Mack DJ, Ilg UJ;** The effects of video game play on the characteristics of saccadic eye movements. *Vision Research.* 2014; 102: 26-32
- Maetzler W, Apel A,** Langkamp M, **Deuschle C, Dilger SS,** Stirnkorb JG, **Schulte C,** Schleicher E, **Gasser T, Berg D.** Comparable Autoantibody Serum Levels against Amyloid- and Inflammation-Associated Proteins in Parkinson's Disease Patients and Controls. *PLoS One.* 2014 Feb 21; 9(2): e88604

- Maetzler W**, Karam M, Berger MF, **Heger T**, **Maetzler C**, Ruediger H, Bronzova J, Lobo PP, Ferreira JJ, Ziemssen T, **Berg D**. Time- and frequency-domain parameters of heart rate variability and sympathetic skin response in Parkinson's disease. *J Neural Transm*. 2014 Jul 20. [Epub ahead of print]
- Maetzler W**, Pilotto A, **Apel A**, **Deuschle C**, Kuebart G, **Heinzel S**, **Liepert-Scarfone I**, **Schulte C**, Reusch D, Schleicher E, Rothfuss O, Schneider A, Dodel R, **Gasser T**, **Berg D**. In vivo markers of Parkinson's disease and dementia with Lewy bodies: current value of the 5G4  $\alpha$ -synuclein antibody. *Acta Neuropathol*. 2014 Dec; 128(6): 893-5
- Maetzler W**. Comment: Why do nondopaminergic features in Parkinson disease matter? *Neurol*. 2014 Feb; 82(5): 417-418
- Maier FC, Wehrl HF, Schmid AM, Mannheim JG, Wiehr S, Lerdkrai C, Calaminus C, Stahlschmidt A, **Ye L**, Burnet M, Stiller D, Sabri O, Reischl G, Staufenbiel M, Garaschuk O, **Jucker M**, Pichler BJ (2014). Longitudinal PET/MRI reveals  $\beta$ -amyloid deposition and rCBF dynamics, and connects vascular amyloidosis to quantitative loss of perfusion. *Nat Med* 20: 1485-92
- Maljevic S**, **Lerche H** (2014). Potassium channel genes and benign familial neonatal epilepsy. *Prog Brain Res* 213: 17-53.
- Mallaret M, Lagha-Boukbiza O, **Biskup S**, Namer IJ, Rudolf G, Anheim M, Tranchant C. SPG15: a cause of juvenile atypical levodopa responsive parkinsonism. *J Neurol*. 2014 Feb; 261(2): 435-7. doi: 10.1007/s00415-013-7216-4
- Mallaret M, **Synofzik M**, Lee J, Sagum CA, Mahajnah M, Sharkia R, Drouot N, Renaud M, Klein FAC, Anheim M, Tranchant C, Mignot C, Mandel J-L, Bedford M, Bauer P, Salih MA, **Schüle R**, **Schöls L**, Aldaz M, Koenig M. The tumour suppressor gene WWOX is mutated in autosomal recessive cerebellar ataxia with epilepsy and mental retardation. *Brain*. 2014; 137: 411-419
- Marciniak K**, Atabaki A, **Dicke PW**, **Thier P**; Disparate substrates for head gaze following and face perception in the monkey superior temporal sulcus. *Elife*. 2014 Jul 14; e03222. doi: 10.7554/eLife.03222
- Maricic I, Halder R, **Bischof F**, Kumar V (2014). Dendritic cells and anergic type I NKT cells play a crucial role in sulfatide-mediated immune regulation in experimental autoimmune encephalomyelitis. *Journal of immunology* 193: 1035-1046
- Mencacci NE, Isaias IU, Reich MM, Ganos C, Plagnol V, Polke JM, Bras J, Hersheson J, Stamelou M, Pittman AM, Noyce AJ, Mok KY, Opladen T, Kunstmann E, Hodecker S, Münchau A, Volkmann J, Samnick S, Sidle K, Nanji T, Sweeney MG, Houlden H, Batla A, Zecchinelli AL, Pezzoli G, Marotta G, Lees A, Alegria P, Krack P, Cormier-Dequaire F, Lesage S, Brice A, Heutink P, **Gasser T**, Lubbe SJ, Morris HR, Taba P, Koks S, Majounie E, Raphael Gibbs J, Singleton A, Hardy J, Klebe S, Bhatia KP, Wood NW, **International Parkinson's Disease Genomics Consortium** and UCL-exomes consortium. Parkinsons disease in GTP cyclohydrolase 1 mutation carriers. *Brain*. 2014; 137: 2480-2492
- Menzler K, Hermsen A, Balkenhol K, Duddek C, Bugiel H, Bauer S, Schorge S, Reif PS, Klein KM, Haag A, Oertel WH, Hamer HM, Knake S, Trucks H, Sander T, Rosenow F, **EuroEPINOMICS RES Consortium** (2014). A common SCN1A splice-site polymorphism modifies the effect of carbamazepine on cortical excitability – a pharmacogenetic transcranial magnetic stimulation study. *Epilepsia* 55: 362-369.
- Mielke MM, **Maetzler W**; A 'bird's eye' view on the current status and potential benefits of blood biomarkers for Parkinson's disease. *Biomark Med*. 2014; 8(2): 225-7
- Mihulowicz U**, Willmes K, **Karnath H-O**, Klein E; Single-digit arithmetic processing – anatomical evidence from statistical voxel-based lesion analysis. *Frontiers in Human Neuroscience*. 2014; 8: 286
- Milian M, **Zeltner L**, Erb M, Klose U, Wagner K, Frings L, Veil C, Rona S, Lerche H, Klamer S (2014). Incipient preoperative reorganization processes of verbal memory functions in patients with left temporal lobe epilepsy. *Epilepsy & behavior* 42C: 78-85
- Milian M, Zeltner L, Erb M, Klose U, Wagner K, Frings L, Veil C, Rona S, **Lerche H**, **Klamer S**. Incipient preoperative reorganization processes of verbal memory functions in patients with left temporal lobe epilepsy. *Epilepsy Behav*. 2015 Jan; 42: 78-85. doi: 10.1016/j.yebeh.2014.11.026. Epub 2014 Dec 11.

- Müller vom Hagen J**, Karle KN, **Schüle R**, Krageloh-Mann I, **Schöls L**. Leukodystrophies underlying cryptic spastic paraparesis: frequency and phenotype in 76 patients. *Euro J Neurol* 2014 Jul; 21(7): 983-8
- Muona M, Berkovic SF, Dibbens LM, Oliver KL, **Maljevic S**, Bayly MA, Joensuu T, Canafoglia L, Franceschetti S, Michelucci R, Markkinen S, Heron SE, Hildebrand MS, Andermann E, Andermann F, Gambardella A, Tinuper P, Licchetta L, Scheffer IE, Criscuolo C, Filla A, Ferlazzo E, Ahmad J, Ahmad A, Baykan B, Said E, Topcu M, Riguzzi P, King MD, Ozkara C, Andrade DM, Engelsen BA, Crespel A, Lindenau M, Lohmann E, Saletti V, Massano J, Privitera M, Espay AJ, Kauffmann B, Duchowny M, Møller RS, Straussberg R, Afawi Z, Ben-Zeev B, Samocha KE, Daly MJ, Petrou S, Lerche H, Palotie A, Lehesjoki AE. A recurrent de novo mutation in KCNC1 causes progressive myoclonus epilepsy. *Nat Genet.* 2015 Jan; 47(1): 39-46. doi: 10.1038/ng.3144. Epub 2014 Nov 17.0
- Murakami T, Kell CA, Restle J, Ugawa Y, **Ziemann U** (2014). Left dorsal speech stream components and their contribution to phonological processing. *J Neurosci* (in press)
- Nalls MA, Bras J, Hernandez DG, Keller MF, Majounie E, Renton AE, Saad M, Jansen I, Guerreiro R, Lubbe S, Plagnol V, Gibbs JR, **Schulte C**, Pankratz N, Sutherland M, Bertram L, Lill CM, DeStefano AL, Faroud T, Eriksson N, Tung JY, Edsall C, Nichols N, Brooks J, Arepalli S, Pliner H, Letson C, **Heutink P**, Martinez M, **Gasser T**, Traynor BJ, Wood N, Hardy J, Singleton AB; **International Parkinson's Disease Genomics Consortium (IPDGC)** and the Parkinson's Disease meta-analysis consortium. *NeuroX*, a fast and efficient genotyping platform for investigation of neurodegenerative diseases. *Neurobiol. Aging.* 2014 Aug 4. pii: S0197-4580(14)00497-7. doi: 10.1016/j.neurobiolaging.2014.07.028. [Epub ahead of print]
- Nalls MA, Pankratz N, Lill CM, Do CB, Hernandez DG, Saad M, DeStefano AL, Kara E, Bras J, **Sharma M**, **Schulte C**, Keller MF, Arepalli S, Letson C, Edsall C, Stefansson H, Liu X, Pliner H, Lee JH, Cheng R; **International Parkinson's Disease Genomics Consortium (IPDGC)**; Parkinson's Study Group (PSG) Parkinson's Research: The Organized GENetics Initiative (PROGENI); 23andMe; GenePD; NeuroGenetics Research Consortium (NGRC); Hussman Institute of Human Genomics (HIHG); The Ashkenazi Jewish Dataset Investigator; Cohorts for Health and Aging Research in Genetic Epidemiology (CHARGE); North American Brain Expression Consortium (NABEC); United Kingdom Brain Expression Consortium (UKBEC); Greek Parkinson's Disease Consortium; Alzheimer Genetic Analysis Group, Ikram MA, Ioannidis JP, Hadjigeorgiou GM, Bis JC, Martinez M, Perlmutter JS, Goate A, Marder K, Fiske B, Sutherland M, Xiromerisiou G, Myers RH, Clark LN, Stefansson K, Hardy JA, Heutink P, Chen H, Wood NW, Houlden H, Payami H, Brice A, Scott WK, **Gasser T**, Bertram L, Eriksson N, Foroud T, Singleton AB. Large-scale meta-analysis of genome-wide association data identifies six new risk loci for Parkinson's disease. *Nat. Genet.* 2014 Sep; 46(9): 989-93
- Nalls MA, Saad M, Noyce AJ, Keller MF, Schrag A, Bestwick JP, Traynor BJ, Gibbs JR, Hernandez DG, Cookson MR, Morris HR, Williams N, **Gasser T**, Heutink P, Wood N, Hardy J, Martinez M, Singleton AB. Genetic comorbidities in Parkinson's disease. *Hum Mol Genet;* 2014; 23(3); 831-841
- Nava C, Dalle C, Rastetter A, Striano P, de Kovel CG, Nabbout R, Cances C, Ville D, Brilstra EH, Gobbi G, Raffo E, Bouteiller D, Marie Y, Trouillard O, Robbiano A, Keren B, Agher D, Roze E, Lesage S, Nicolas A, Brice A, Baulac M, Vogt C, El Hajj N, Schneider E, Suls A, Weckhuysen S, Gormley P, Lehesjoki AE, De Jonghe P, Helbig I, Baulac S, Zara F, Koeleman BP, **EuroEPINOMICS RES Consortium**, Haaf T, LeGuern E, Depienne C (2014). De novo mutations in HCN1 cause early infantile epileptic encephalopathy. *Nat Gen* 46: 640-645.
- Nieratschker V, Kiefer C, Giel K, **Krüger R**, Plewnia C. (2014). The COMT Val/Met polymorphism modulates effects of tDCS on response inhibition. *Brain Stimulation*, doi: 10.1016/j.brs.2014.11.009 [Epub ahead of print]

- O'Bryant SE, Gupta V, Henriksen K, Edwards M, Jeromin A, Lista S, Bazenet C, Soares H, Lovestone S, Hampel H, Montine T, Blennow K, Foroud T, Carrillo M, Graff-Radford N, **Laske C**, Breteler M, Shaw L, Trojanowski JQ, Schupf N, Rissman RA, Fagan AM, Oberoi P, Umek R, Weiner MW, Grammas P, Posner H, Martins R; STAR-B and BBBIG working groups (2014). Guidelines for the standardization of preanalytic variables for blood-based biomarker studies in Alzheimer's disease research. *Alzheimer's Dement* S1552-5260(14)02765-4
- Obayashi M, Stevanin G, **Synofzik M**, Monin ML, Duyckaerts C, Sato N, Streichenberger N, Vighetto A, Desestret V, Tesson C, Wichmann HE, Illig T, Huttenlocher J, Kita Y, Izumi Y, Mizusawa H, **Schöls L**, Klopstock T, Brice A, Ishikawa K, Dürr A. Spinocerebellar ataxia type 36 exists in diverse populations and can be caused by a short hexanucleotide GGCTG repeat expansion. *J Neurol Neurosurg Psychiatry*. 2014 Dec 4. pii: jnnp-2014-309153
- Orhan G**, **Bock M**, Schepers D, Ilina EI, Reichel SN, **Loffler H**, **Jezutkovic N**, Weckhuysen S, Mandelstam S, Suls A, Danker T, Guenther E, Scheffer IE, De Jonghe P, **Lerche H**, **Maljevic S** (2014). Dominant-negative effects of KCNQ2 mutations are associated with epileptic encephalopathy. *Ann Neurol* 75: 382-394.
- Pera J, Lechner S, **Biskup S**, Strach M, Grodzicki T, Slowik A. Two novel mutations of the SETX gene and ataxia with oculomotor apraxia type 2. *Clin Neurol Neurosurg*. 2014 Nov 6; 128C: 44-46
- Pérez-Revuelta BI, Hettich MM, Ciociaro A, **Rotermund C**, **Kahle PJ**, Krauss S, and Di Monte D. (Metformin lowers Ser-129 phosphorylated a-synuclein levels via mTor-dependent protein phosphatase 2A activation. *Cell Death Dis*. 2014; 5, e1209
- Peterman JS, **Christensen A**, **Giese MA**, et al; Extraction of social information from gait in schizophrenia. *Psychological Medicine*. 2014; 44(5): 987-996
- Poli S**, Purruicker J, Priglinger M, **Ebner M**, Sykora M, **Diedler J**, Bulut C, Popp E, Rupp A, Hametner C (2014). Rapid Induction of COOLing in Stroke Patients (iCOOL1): a randomised pilot study comparing cold infusions with nasopharyngeal cooling. *Crit Care*. 18: 582.
- Premoli I**, Castellanos N, Rivolta D, Belardinelli P, Bajo R, Zipser C, Espenhahn S, Heidegger T, **Müller-Dahlhaus F**, **Ziemann U** (2014). TMS-EEG signatures of GABAergic neurotransmission in the human cortex. *Journal of Neuroscience* 34: 5603–5612
- Premoli I**, Rivolta D, **Espenhahn S**, Castellanos N, Belardinelli P, Ziemann U, **Müller-Dahlhaus F** (2014). Characterization of GABAB-receptor mediated neurotransmission in the human cortex by paired-pulse TMS-EEG. *NeuroImage* 103C: 152-162
- Purruicker JC, Hametner C, Engelbrecht A, Bruckner T, Popp E, **Poli S** (2014). Comparison of stroke recognition and stroke severity scores for stroke detection in a single cohort. *J Neurol Neurosurg Psychiatry* (in press, doi: 10.1136/jnnp-2014-309260)
- Puttagunta R**, Tedeschi A, Soria MG, Lindner R, Rahtore KI, Gaub P, Joshi Y, Nguyen T, Schmandke A, Bradke F, **Di Giovanni S**. PCAF-dependent epigenetic changes promote axonal regeneration in the central nervous system. *Nature Comm*. 2014 Apr 1; 5: 3527
- Quadrato G, Elnaggar MY, Duman C, Nguyen T, **Forsberg K**, **Di Giovanni S**. Modulation of GABAA receptor signalling increases activity-dependent hippocampal neurogenesis and suppresses innate anxiety response in adult mice through NFATc4 transcriptional activity. *J Neurosci*. 2014 Jun 18; 34(25): 8630-45.
- Quasthoff K, Ferrea S, Fleischer W, Theiss S, Schnitzler A, **Dihné M**, Walter J. Freshly frozen E18 rat cortical cells can generate functional neural networks after standard cryopreservation and thawing procedures. *Cytotechnology*. 2014 Feb 23. [Epub ahead of print]
- Randriamboavonjy V, Sopova K, Stellos K, **Laske C** (2014). Platelets as potential link between diabetes and Alzheimer's disease. *Curr Alzheimer Res* 11: 862-8
- Rau MK, **Braun C**, Skardelly M, Schittenhelm J, Paulsen F, Bender B, Ernemann U, Bisdas S (2014). Prognostic value of blood flow estimated by arterial spin labeling and dynamic susceptibility contrast-enhanced MR imaging in high-grade gliomas. *J Neurooncol* 120(3): 557-66



- Rauscher J, Beschorner R, Gierke M, Bisdas S, **Braun C**, Ebner FH, Schittenhelm J (2014). WT1 expression increases with malignancy and indicates unfavourable outcome in astrocytoma. *Journal of clinical pathology* 67(7): 556-61
- Reid CA, Leaw B, Richards KL, Richardson R, Wimmer V, Yu C, Hill-Yardin EL, **Lerche H**, Scheffer IE, Berkovic SF, Petrou S (2014). Reduced dendritic arborization and hyperexcitability of pyramidal neurons in a Scn1b-based model of Dravet syndrome. *Brain*: 137: 1701-1715.
- Reifenberger G, Weber RG, Riehmer V, Kaulich K, Willscher E, Wirth H, Gietzelt J, Hentschel B, Westphal M, Simon M, Schackert G, Schramm J, Matschke J, Sabel MC, Gramatzki D, Felsberg J, Hartmann C, Steinbach JP, Schlegel U, Wick W, Radlwimmer B, Pietsch T, Tonn JC, von Deimling A, Binder H, **Weller M**, Loeffler M; for the German Glioma Network (2014). Molecular characterization of long-term survivors of glioblastoma using genome- and transcriptome-wide profiling. *International journal of cancer* 135(8): 1822-31
- Reinthal EM, Lal D, Jurkowski W, Feucht M, Steinbock H, Gruber-Sedlmayr U, Ronen GM, Geldner J, Haberlandt E, Neophytou B, Hahn A, Altmüller J, Thiele H, Toliat MR, **EuroEpinomics Consortium**, **Lerche H**, Nurnberg P, Sander T, Neubauer BA, Zimprich F (2014a) Analysis of ELP4, SRPX2, and interacting genes in typical and atypical rolandic epilepsy. *Epilepsia* 55: e89-93.
- Reinthal EM, Lal D, Lebon S, Hildebrand MS, Dahl HH, Regan BM, Feucht M, Steinbock H, Neophytou B, Ronen GM, Roche L, Gruber-Sedlmayr U, Geldner J, Haberlandt E, Hoffmann P, Herms S, Gieger C, Waldenberger M, Franke A, Wittig M, Schoch S, Becker AJ, Hahn A, Mannik K, Toliat MR, Winterer G, p11.2 European C, **Lerche H**, Nurnberg P, Mefford H, Scheffer IE, Berkovic SF, Beckmann JS, **EuroEPINOMICS Consortium**, Sander T, Jacquemont S, Raymond A, Zimprich F, Neubauer BA (2014b) 16p11.2 600 kb Duplications confer risk for typical and atypical Rolandic epilepsy. *Hum Mol Genet* 23: 6069-6080.
- Rizas KD, Nieminen T, Barthel P, **Zürn CS**, Kähönen M, Viik J, Lehtimäki T, Nikus K, Eick C, Greiner TO, Wendel HP, Seizer P, Schreieck J, Gawaz M, Schmidt G, Bauer A (2014). Sympathetic activity-associated periodic repolarization dynamics predict mortality following myocardial infarction. *J Clin Invest* 124(4): 1770-1780.
- Rossor AM, Oates EC, Salter HK, Liu Y, Murphy SM, **Schüle R**, Gonzalez MA, Scoto M, Phadke R, Sewry CA, Houlden H, Jordanova A, Tournev I, Chamova T, Litvinenko I, Zuchner S, Herrmann DN, Blake J, Sowden JE, Acsadi G, Rodriguez ML, Menezes MP, Clarke NF, Auer Grumbach M, Bullock SL, Muntoni F, Reilly MM and North KN. Phenotypic and molecular insights into spinal muscular atrophy due to mutations in BICD2. *Brain*, 2014 Dec 14. pii: awu356. [Epub ahead of print]
- Rotermund C**, Truckenmüller FM, Schell H and **Kahle PJ**. Diet-induced obesity accelerates the onset of terminal phenotypes in  $\alpha$ -synuclein transgenic mice. *J. Neurochem.* 2014; 131, 848-858 Cover image.
- Schaeffer E**, **Liepert-Scarfone I**, **Maetzler W**, **Sass C**, **Reilmann R**, **Berg D**. Quantitative motor assessment of dyskinesias in Parkinson's disease. *Mov. Disord. Meeting Abstract*: 1061, 29: S391-S392 Supplement: 1 MAY 2014
- Schell C, Suchan J, **Himmelbach M**, Haarmeier T, Borchers S. Limb apraxia in acute ischemic stroke: a neglected clinical challenge? *Neurocase*. 2014; 20: 158-162
- Schlipf NA, **Schüle R**, Klimpe S, Karle KN, **Synofzik M**, **Wolf J**, Riess O, **Schöls L**, Bauer P. AP5Z1/SPG48 frequency in autosomal recessive and sporadic spastic paraplegia. *Mol Genet Genomic Med.* 2014 Sep; 2(5): 379-82
- Schneider S, Christensen A, Häußinger F, Fallgatter A, **Giese MA**, Ehlis A; Show me how you walk and I tell you how you feel – A functional near-infrared spectroscopy study on emotion perception based on human gait. *Neuroimage*. 2014; 85: 380-390
- Schöndorf DC**, Aureli M, McAllister FE, Hindley CJ, Mayer F, Schmid B, Sardi SP, Valsecchi M, **Hoffmann S**, **Schwarz LK**, Hedrich U, **Berg D**, Shihabuddin LS, Hu J, Pruszk J, Gygi SP, Sonnino S, **Gasser T**, **Deleidi M**. iPSC-derived neurons from GBA1-associated Parkinson's disease patients show autophagic defects and impaired calcium homeostasis. *Nat Commun.* 2014 Jun 6; 5: 4028

- Schöndorf DC, Aureli M, McAllister FE, Hindley CJ, Mayer F, Schmid B, Sardi SP, Valsecchi M, Hoffmann S, Schwarz LK, **Hedrich U, Berg D**, Shihabuddin LS, Hu J, Pruszek J, Gygi SP, Sonnino S, **Gasser T**, Deleidi M. iPSC-derived neurons from GBA1-associated Parkinson's disease patients show autophagic defects and impaired calcium homeostasis. *Nat Commun.* 2014 Jun 6; 5: 4028. doi: 10.1038/ncomms5028.
- Schubert J**, Siekierska A, Langlois M, May P, Huneau C, **Becker F**, Muhle H, Suls A, Lemke JR, de Kovel CG, Thiele H, Konrad K, Kawalia A, Toliat MR, Sander T, Ruschendorf F, Caliebe A, Nagel I, Kohl B, Kecskes A, Jacmin M, Hardies K, Weckhuysen S, Riesch E, Dorn T, Brilstra EH, Baulac S, Moller RS, Hjalgrim H, Koeleman BP, **Euro E-RESC**, Jurkat-Rott K, Lehman-Horn F, Roach JC, Glusman G, Hood L, Galas DJ, Martin B, de Witte PA, Biskup S, De Jonghe P, Helbig I, Balling R, Nurnberg P, Crawford AD, Esguerra CV, **Weber YG, Lerche H** (2014). Mutations in STX1B, encoding a presynaptic protein, cause fever-associated epilepsy syndromes. *Nat Genet* 46: 1327-1332.
- Schubert J, Siekierska A, Langlois M, May P, Huneau C, Becker F, Muhle H, Suls A, Lemke JR, de Kovel CG, Thiele H, Konrad K, Kawalia A, Toliat MR, Sander T, Ruschendorf F, Caliebe A, Nagel I, Kohl B, Kecskés A, Jacmin M, Hardies K, Weckhuysen S, **Riesch E**, Dorn T, Brilstra EH, Baulac S, Møller RS, Hjalgrim H, Koeleman BP; EuroEPINOMICS RES Consortium, Jurkat-Rott K, Lehman-Horn F, Roach JC, Glusman G, Hood L, Galas DJ, Martin B, de Witte PA, **Biskup S**, De Jonghe P, Helbig I, Balling R, Nürnberg P, Crawford AD, Esguerra CV, Weber YG, **Lerche H**. Mutations in STX1B, encoding a presynaptic protein, cause fever-associated epilepsy syndromes. *Nat Genet.* 2014 Nov 2. doi: 10.1038/ng.3130
- Schuberth M, Levin J, Sawalhe D, Schwarzkopf R, von Baumgarten L, Ertl-Wagner B, Rominger A, Arzberger T, Kretzschmar HA, Froböse T, Diehl-Schmid J, **Biskup S**, Danek A. [Hereditary diffuse leukoencephalopathy with spheroids: a microgliopathy due to CSF1 receptor impairment.] *Nervenarzt.* 2014 Apr; 85(4): 465-70. doi: 10.1007/s00115-014-4052-4. German
- Schwenck J, **Tabatabai G**, Skardelly M, Reischl G, Beschorner R, Pichler B, la Fougere C (2015) In vivo visualization of prostate-specific membrane antigen in glioblastoma. *European journal of nuclear medicine and molecular imaging* 42(1): 170-1
- Seeger A, Klose U, **Bischof F**, Strobel J, Ernemann U, Hauser TK (2014). Zoomed EPI DWI of Acute Spinal Ischemia Using a Parallel Transmission System. *Clinical neuroradiology* (in press, doi: 10.1007/s00062-014-0342-2).
- Seeger A, Kramer U, **Bischof F**, Schuettauf F, Ebner F, Danz S, Ernemann U, Hauser TK (2014). Feasibility of Noninvasive Diagnosis and Treatment Planning in a Case Series with Carotid-Cavernous Fistula using High-Resolution Time-Resolved MR-Angiography with Stochastic Trajectories (TWIST) and Extended Parallel Acquisition Technique (ePAT 6) at 3 T. *Clinical Neuroradiology* (in press, doi: 10.1007/s00062-014-0298-2)
- Senn V, Wolff SB, Herry C, Grenier F, **Ehrlich I**, Gründemann J, Fadok JP, Müller C, Letzkus JJ, Lüthi A. Long-range connectivity defines behavioral specificity of amygdala neurons. *Neuron.* 2014 Jan 22; 81(2): 428-37.
- Shaikhibrahim Z, Menon R, Braun M, Offermann A, Queisser A, Boehm D, Vogel W, Rüenauer K, Ruiz C, Zellweger T, Svensson M, Andren O, Kristiansen G, Wernert N, Bubendorf L, Kirfel J, **Biskup S**, Perner S. MED15, encoding a subunit of the mediator complex, is overexpressed at high frequency in castration-resistant prostate cancer. *Int J Cancer.* 2014 Jul 1; 135(1): 19-26. doi: 10.1002/ijc.28647
- Shaikhibrahim Z, Offermann A, Braun M, Menon R, Syring I, Nowak M, Halbach R, Vogel W, Ruiz C, Zellweger T, Rentsch C, Svensson M, Andren O, Bubendorf L, **Biskup S**, Duensing S, Kirfel J, Perner S. MED12 overexpression is a frequent event in castration-resistant prostate cancer. *Endocr Relat Cancer.* 2014 Jun 17. pii: ERC-14-0171
- Sharkia R, Mahajnah M, Zalan A, Sourlis C, Bauer P, **Schöls L**. Sanfilippo type A: new clinical manifestations and neuro-imaging findings in patients from the same family in Israel: a case report. *J Med Case Rep.* 2014 Feb 28; 8: 78
- Sharma M, Krüger R, Gasser T.**: From genome-wide association studies to next-generation sequencing: lessons from the past and planning for the future. *JAMA Neurol.* 2014 Jan; 71(1):5-6

- Sharma M, Wenning G, Krüger R** on behalf of EMSA consortium. Parkinson disease and Multiple System atrophy: Linking synucleinopathies with mitochondrial pathologies. *N Engl J Med* 2014 (in press)
- Sidiropoulos K, de Bleser R, Ablinger I, **Ackermann H** (2014). The relationship between verbal and nonverbal auditory signal processing in conduction aphasia: behavioral and anatomical evidence for common decoding mechanisms. *Neurocase* (in press, doi: 10.1080/13554794.2014.902471)
- Silber T, Ziemann U**, Ernemann U, **Bischof F** (2014). Analysis of periinterventional complications of intracranial angioplasty and stenting: a single center experience. *Eur J Radiol* 83(12):2190-5
- Sopova K, Gatsiou K, Stellos K, **Laske C** (2014). Dysregulation of neurotrophic and haematopoietic growth factors in Alzheimer's disease: from pathophysiology to novel treatment strategies. *Curr Alzheimer Res* 11: 27-39
- Spivak O, Thier P**, Barash S; Persistence of the dark-background-contingent gaze upshift during visual fixations of rhesus monkeys. *Journal of Neurophysiology*. 2014; 112(8): 1999-2005. doi: 10.1152/jn.00666.2013
- Stafa K, Tsika E, Moser R, Musso A, Glauser L, Jones A, **Biskup S**, Xiong Y, Bandopadhyay R, Dawson VL, Dawson TM, Moore DJ. Functional interaction of Parkinson's disease-associated LRRK2 with members of the dynamin GTPase superfamily. *Hum Mol Genet*. 2014 Apr 15; 23(8): 2055-77. doi: 10.1093/hmg/ddt600
- Steinhoff BJ, Hamer H, Trinka E, Schulze-Bonhage A, Bien C, Mayer T, Baumgartner C, **Lerche H**, Noachtar S (2014). A multicenter survey of clinical experiences with perampanel in real life in Germany and Austria. *Epilepsy res* 108: 986-988.
- Stellos K, Katsiki N, Tatsidou P, Bigalke B, **Laske C** (2014). Association of platelet activation with vascular cognitive impairment: implications in dementia development? *Curr Vasc Pharmacol* 12: 152-4
- Suchan J, Umarova R, Schnell S, **Himmelbach M**, Weiller C, **Karnath H-O**, Saur D.; Fiber pathways connecting cortical areas relevant for spatial orienting and exploration. *Human Brain Mapping*. 2014; 35: 1031-1043
- Sultan F**; From cerebellar texture to movement optimization. *Biological Cybernetics*. 2014; 108(5): 677-688
- Sykora M, Steinmacher S, Steiner T, **Poli S, Diedler J** (2014). Association of intracranial pressure with outcome in comatose patients with intracerebral hemorrhage. *Journal of the neurological sciences* 342(1-2): 141-5
- Synofzik M**, Born C, Rominger A, Lummel N, **Schöls L, Biskup S, Schule C**, Grasshoff U, Klopstock T, Adamczyk C. (Targeted high-throughput sequencing identifies a TARDBP mutation as a cause of early-onset FTD without motor neuron disease. *Neurobiology of Aging*. 2014; 35: 1212 e1211-1215
- Synofzik M**, Gonzalez MA, Lourenco CM, Coutelier M, Haack TB, Rebelo A, Hannequin D, Strom TM, Prokisch H, Kernstock C, Durr A, **Schöls L**, Lima-Martinez MM, Farooq A, **Schüle R**, Stevanin G, Marques W, Jr., Zuchner S. PNPLA6 mutations cause Boucher-Neuhauser and Gordon Holmes syndromes as part of a broad neurodegenerative spectrum. *Brain*. 2014; 137: 69-77
- Synofzik M**, Haack TB, Kopajtich R, Gorza M, Rapaport D, Greiner M, Schonfeld C, Freiberg C, Schorr S, Holl RW, Gonzalez MA, Fritsche A, Fallier-Becker P, Zimmermann R, Strom TM, Meitinger T, Zuchner S, **Schüle R, Schöls L**, Prokisch H. Absence of BiP Co-chaperone DNAJC3 Causes Diabetes Mellitus and Multisystemic Neurodegeneration. *American journal of human genetics* 2014; 95: 689-697
- Synofzik M**, Ilg W. Motor Training in Degenerative Spinocerebellar Disease: Ataxia-Specific Improvements by Intensive Physiotherapy and Exergames. *BioMed Research International* 2014: Article ID 583507
- Synofzik M, Ilg W**; Motor training in degenerative spinocerebellar disease: ataxia-specific improvements by intensive physiotherapy and exergames. *BioMed Research International* 11. 2014.
- Synofzik M**, Kernstock C, Haack TB, **Schöls L**. Ataxia meets choriorretinal dystrophy and hypogonadism: Boucher-Neuhauser syndrome due to PNPLA6 mutations. *J Neurol Neurosurg Psychiatry*. 2014 Apr 30. [Epub ahead of print]

- Synofzik M**, Martinez-Carrera LA, Lindig T, **Schöls L**, Wirth B. Dominant spinal muscular atrophy due to BICD2: a novel mutation refines the phenotype. *J Neurol Neurosurg Psychiatry* 2014; 85: 590-592
- Synofzik M**, Muller Vom Hagen J, Haack TB, Wilhelm C, Lindig T, Beck-Wodl S, Nabuurs SB, van Kuilenburg AB, de Brouwer AP, **Schöls L**. X-linked Charcot-Marie-Tooth disease, Arts syndrome, and prelingual non-syndromic deafness form a disease continuum: evidence from a family with a novel PRPS1 mutation. *Orphanet Journal of Rare Diseases* 2014; 9: 24
- Synofzik M**, **Schüle R**, Schulze M, Gburek-Augustat J, Schweizer R, Schirmacher A, Krageloh-Mann I, Gonzalez M, Young P, Zuchner S, **Schöls L**, Bauer P. Phenotype and frequency of STUB1 mutations: next-generation screenings in Caucasian ataxia and spastic paraplegia cohorts. *Orphanet journal of rare diseases* 2014; 9: 57
- Synofzik M**, Vosgerau G, Voss M. L'esperienza dell' agentivita: un intergioco fra predizione e retrodizione. *Sistemi Intelligenti*, Anno XXVI, numero 1, aprile 2014: 39-56
- Synofzik M**, Zuchner S (1993/2014) PNPLA6-Related Disorders. In: *GeneReviews(R)* (Pagon RA, Adam MP, Ardinger HH, Bird TD, Dolan CR, Fong CT, Smith RJH, Stephens K, eds). Seattle (WA). Seattle (WA): University of Washington, Seattle; 1993-2014. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK247161/>.
- Tacik P, Loens S, Schrader C, Gayde-Stephan S, **Biskup S**, Dressler D. Severe familial paroxysmal exercise-induced dyskinesia. *J Neurol*. 2014 Oct; 261(10): 2009-15. 2014 Aug 7
- Tarnutzer AA, Gerth-Kahlert C, Timmann D, Chang DI, Harmuth F, Bauer P, Straumann D, **Synofzik M**. Boucher-Neuhauser syndrome: cerebellar degeneration, chorioretinal dystrophy and hypogonadotropic hypogonadism: two novel cases and a review of 40 cases from the literature. *J Neurol*. 2014 [Epub ahead of print]
- Tezenas du Montcel S, Durr A, Bauer P, Figueroa KP, Ichikawa Y, Brussino A, Forlani S, Rakowicz M, **Schöls L**, Mariotti C, van de Warrenburg BP, Orsi L, Giunti P, Filla A, Szymanski S, Klockgether T, Berciano J, Pandolfo M, Boesch S, Melegh B, Timmann D, Mandich P, Camuzat A; Clinical Research Consortium for Spinocerebellar Ataxia (CRC-SCA); EUROSCA network, Goto J, Ashizawa T, Cazeneuve C, Tsuji S, Pulst SM, Brusco A, Riess O, Brice A, Stevanin G. Modulation of the age at onset in spinocerebellar ataxia by CAG tracts in various genes. *Brain*. 2014 Sep; 137(Pt 9): 2444-55
- Tezenas du Montcel S, Durr A, Rakowicz M, Nanetti L, Charles P, Sulek A, Mariotti C, Rola R, **Schöls L**, Bauer P, Dufau-Garé I, Jacobi H, Forlani S, Schmitz-Hübsch T, Filla A, Timmann D, van de Warrenburg BP, Marelli C, Kang JS, Giunti P, Cook A, Baliko L, Melegh B, Boesch S, Szymanski S, Berciano J, Infante J, Buerk K, Masciullo M, Di Fabio R, Depondt C, Ratka S, Stevanin G, Klockgether T, Brice A, Golmard JL. Prediction of the age at onset in spinocerebellar ataxia type 1, 2, 3 and 6. *J Med Genet*. 2014 Jul; 51(7): 479-86
- Theis L, **Maia Chagas A**, **Arnstein D**, **Schwarz C**, Bethge M; Beyond GLMs: A generative mixture modeling approach to neural system identification. *PLOS Comp Biol*. 2014; 9: e1003356. doi: 10.1371/journal.pcbi.1003356.
- Theofilopoulos S, Griffiths WJ, Crick PJ, Yang S, Meljon A, Ogundare M, Kitambi SS, Lockhart A, Tuschl, Clayton PT, Morris AA, Martinez A, Reddy MA, Martinuzzi A, Bassi MT, Honda A, Mizuochi T, Kimura A, Nittono H, De Michele G, Carbone R, Criscuolo C, Yau JL, Seckl JR, **Schüle R**, **Schöls L**, Sailer AW, Kuhle J, Fraidakis MJ, Gustafsson JA, Steffensen KR, Bjorkhem I, Ernfors P, Jovall J, Arenas E and Wang Y. Cholestenic acids regulate motor neuron survival via liver X receptors. *J Clin Invest*. 2014; 124 (11): 4829-4842
- Todd G, Haberfield M, Faulkner PL, Rae C, Hayes M, Wilcox RA, Taylor JL, Gandevia SC, Godau J, **Berg D**, Piguat O, Double KL. Hand function is impaired in healthy older adults at risk of Parkinson's disease. *J Neural Transm*. 2014 Nov; 121(11): 1377-86
- Tolosa E, Litvan I, Hoglinger GU, Burn D, Lees A, Andres MV, Gomez-Carrillo B, Leon T, Del Ser T, **Tauros Investigators**. A phase 2 trial of the GSK-3 inhibitor tideglusib in progressive supranuclear palsy. *Mov Disord*. 2014 Apr; 29(4): 470-8

- Trebst C, Jarius S, Berthele A, Paul F, Schippling S, Wildemann B, Borisow N, Kleiter I, Aktas O, Kümpfel T, Neuromyelitis Optica Study Group (NEMOS, u.a. **Bischof F, Zeltner L, Ziemann U**) (2014). Update on the diagnosis and treatment of neuromyelitis optica: recommendations of the Neuromyelitis Optica Study Group (NEMOS). *Journal of Neurology* 261: 1-16.
- Tzikas S, Schlak D, Sopova K, Gatsiou A, Stakos D, Stamatelopoulos K, Stellos K, **Laske C** (2014). Increased myeloperoxidase plasma levels in patients with Alzheimer's disease. *J Alzheimers Dis* 39: 557-64
- van der Zee J, Van Langenhove T, Kovacs GG, Dillen L, Deschamps W, Engelborghs S, Matej R, Vandenbulcke M, Sieben A, Dermaut B, Smets K, Van Damme P, Merlin C, Laureys A, Van Den Broeck M, Mattheijssens M, Peeters K, Benussi L, Binetti G, Ghidoni R, Borroni B, Padovani A, Archetti S, Pastor P, Razquin C, Ortega-Cubero S, Hernandez I, Boada M, Ruiz A, de Mendonca A, Miltenberger-Miltenyi G, do Couto FS, Sorbi S, Nacmias B, Bagnoli S, Graff C, Chiang HH, Thonberg H, Perneckzy R, Diehl-Schmid J, Alexopoulos P, Frisoni GB, Bonvicini C, **Synofzik M, Maetzler W, vom Hagen JM, Schöls L**, Haack TB, Strom TM, Prokisch H, Dols-Icardo O, Clarimon J, Lleo A, Santana I, Almeida MR, Santiago B, Heneka MT, Jessen F, Ramirez A, Sanchez-Valle R, Llado A, Gelpi E, Sarafov S, Tournev I, Jordanova A, Parobkova E, Fabrizi GM, Testi S, Salmon E, Strobel T, Santens P, Robberecht W, De Jonghe P, Martin JJ, Cras P, Vandenbergh R, De Deyn PP, Cruts M, Sleegers K, and Van Broeckhoven C. Rare mutations in *SQSTM1* modify susceptibility to frontotemporal lobar degeneration. *Acta neuropathologica* 2014; 128: 397-410
- Vijayaraghavan S, **Maetzler W**, Reimold M, Lithner CU, **Liepert-Scarfone I, Berg D**, Darreh-Shori T. High apolipoprotein E in cerebrospinal fluid of patients with Lewy body disorders is associated with dementia. *Alzheimers Dement.* 2014 Sep; 10(5): 530-540
- Walker MD, Volta M, Cataldi S, Dinelle K, Beccano-Kelly D, Munsie L, Kornelsen R, Mah C, Chou P, Co K, Khinda J, Mroczek M, Bergeron S, Yu K, Cao LP, **Funk N**, Ott T, Galter D, Riess O, **Biskup S**, Milnerwood AJ, Stoessl AJ, Farrer MJ, Sossi V. Behavioral Deficits and Striatal DA Signaling in LRRK2 p.G2019S Transgenic Rats: A Multimodal Investigation Including PET Neuroimaging. *J Parkinsons Dis.* 2014 Jul 7
- Weber YG**, Nies AT, Schwab M, **Lerche H** (2014). Genetic biomarkers in epilepsy. *Neurotherapeutics*: 11: 324-333.
- Weiss D, Klotz R**, Govindan RB, **Scholten M**, Naros G, Murguialday AR, Bunjes F, Meisner C, Plewnia C, **Krüger R**, Gharabaghi A. Subthalamic stimulation modulates cortical network activity and synchronization in Parkinson's disease. *Brain* doi: 10.1093/brain/awu380 [Epub ahead of print]
- Weiss D**, Lam M, Breit S, Gharabaghi A, **Krüger R**, Luft AR, **Wächter T**. The subthalamic nucleus modulates the early phase of probabilistic classification learning. *Exp Brain Res* 2014 Jul; 232(7): 2255-62
- Weiss D, Mielke C, Wächter T**, Liscic RM, **Scholten M**, Plewnia C, Gharabaghi A, **Krüger R**. Long-term outcome of deep brain stimulation in three patients with Fragile X-associated tremor/ataxia syndrome. *Park Rel Disord.* 2014 doi: 10.1016/j.parkreldis.2014.12.015 [Epub ahead of print]
- Wictorin K, Bradvik B, Nilsson K, Soller M, van Westen D, Bynke G, Bauer P, **Schöls L**, Puschmann A. Autosomal dominant cerebellar ataxia with slow ocular saccades, neuropathy and orthostatism: A novel entity?. *Parkinsonism Relat Disord.* 2014 Jul; 20(7): 748-54
- Wilke C, Deuschle C, Rattay TW, Maetzler W, Synofzik M**. Total tau is increased, but phosphorylated tau not decreased, in cerebrospinal fluid in amyotrophic lateral sclerosis. *Neurobiology of aging.* 2014 [Epub ahead of print]
- Wolff SB, Gründemann J, Tovote P, Krabbe S, Jacobson GA, Müller C, Herry C, **Ehrlich I**, Friedrich RW, Letzkus JJ, Lüthi A. Amygdala interneuron subtypes control fear learning through disinhibition. *Nature.* 2014 May 22; 509(7501): 453-8.
- Wolking S, Becker F**, Bast T, Wiemer-Kruel A, Mayer T, **Lerche H, Weber YG** (2014). Focal epilepsy in glucose transporter type 1 (Glut1) defects: case reports and a review of literature. *J Neurol* 261: 1881-1886.
- Wurster CD, Graf H, **Ackermann H**, Groth K, Kassubek J, Riecker A (2014). Neural correlates of rate-dependent finger-tapping in Parkinson's disease. *Brain structure & function* (in press, doi: 10.1007/s00429-014-0749-1)

- Wurster I, Abaza A, Brockmann K, Liepelt-Scarfone I, Berg D.** Parkinson's disease with and without preceding essential tremor-similar phenotypes: a pilot study. *J Neurol.* 2014 May; 261(5): 884-8
- Yonmohamadi Y, Poudel G, Innes C, **Weiss D, Krüger R,** Jones R. Comparison of Beamformers for EEG Source Signal Reconstruction. *Biomed Signal Process Control* 2014; 14: 175-188
- Zhu J, Sreekumar V, Westermeier J, Vereshchagina N, Burbulla LF, Daub K, Martins LM, Voitalla D, **Krüger R,** Rasse TM. Knockdown of Hsc70-5/mortalin induces loss of synaptic mitochondria in a Drosophila Parkinson's disease model. *PLoS One* 2014 (doi: 10.1371/journal.pone.0083714)
- Zils K, Wirth T, Loff S, **Biskup S,** von Kalle T, Bielack S. Multiple metachronous osteosarcomas in a patient with Li-Fraumeni syndrome. *Pediatr Hematol Oncol.* 2014 May; 31(4): 359-61
- Zuern CS,** Eick C, Rizas KD, Bauer S, Langer H, Gawaz M, Bauer A (2014). Reply: Baroreflex sensitivity and renal sympathetic denervation. *J Am Coll Cardiol* 63(22): 2434
- Zuern CS,** Eick C, Rizas KD, Bauer S, Langer H, Gawaz M, Bauer A (2014). Reply: Baroreflex sensitivity: a reliable predictor of response to renal denervation? *J Am Coll Cardiol* 64(2): 233-234
- Zuern CS,** Rizas KD, Eick C, Vogtt MI, Bigalke B, Gawaz M, Bauer A (2014). Severe autonomic failure as a predictor of mortality in aortic valve stenosis. *Int J Cardiol* 176(3): 782-787
- Zündorf IC, **Karnath H-O,** Lewald J.; The effect of brain lesions on sound localization in complex acoustic environments. *Brain.* 2014; 137: 1410-1418

## Reviews

- Brown GC, **Neher JJ** (2014). Microglial phagocytosis of live neurons. *Nat Rev Neurosci* 15: 209-16
- Di Pino G, Pellegrino G, Assenza G, Capone F, Ferreri F, Formica D, Ranieri F, Tombini M, **Ziemann U**, Rothwell JC, Di Lazzaro V (2014). Evaluation and modulation of brain plasticity in stroke: a novel model for neurorehabilitation. *Nature Reviews Neurology* 10(10): 597-608
- Esposito E, Ebner M, Ziemann U, Poli S** (2014). Intra-Arterial Cold Infusions for Selective Brain Cooling in Stroke. *Journal of Cerebral Blood Flow & Metabolism* 34(5): 743-52
- Forsberg K** and **Di Giovanni S**. Cross Talk between Cellular Redox Status, Metabolism, and p53 in Neural Stem Cell Biology. *Neuroscientist*. 2014 Jan 31. [Epub ahead of print]
- Lefaucheur JP, Andre-Obadia N, Antal A, Ayache SS, Baeken C, Benninger DH, Cantello RM, Cincotta M, de Carvalho M, De Ridder D, Devanne H, Di Lazzaro V, Filipovic SR, Hummel FC, Jaaskelainen SK, Kimiskidis VK, Koch G, Langguth B, Nyffeler T, Oliviero A, Padberg F, Poulet E, Rossi S, Rossini PM, Rothwell JC, Schonfeldt-Lecuona C, Siebner HR, Slotema CW, Stagg CJ, Valls-Sole J, **Ziemann U**, Paulus W, Garcia-Larrea L (2014). Evidence-based guidelines on the therapeutic use of repetitive transcranial magnetic stimulation (rTMS) *Clinical Neurophysiology* 125(11): 2150-206
- Mariën P, **Ackermann H**, Adamaszek M, Barwood CH, Beaton A, Desmond J, De Witte E, Fawcett AJ, Hertrich I, Küper M, Leggio M, Marvel C, Molinari M, Murdoch BE, Nicolson RI, Schmammann JD, Stoodley CJ, Thürling M, Timmann D, Wouters E, Ziegler W (2014). Consensus paper: Language and the cerebellum: an ongoing enigma. *Cerebellum* 13(3): 386-410
- Mielke C, **Krüger R**. Aktuelles zu den genetischen Ursachen der Parkinson-Krankheit. *J Neurol Neurochir Psych*. 2014; (15): 16-19
- Müller-Dahlhaus F, Ziemann U** (2014). Metaplasticity in human cortex. *The Neuroscientist* (in press, doi: 10.1177/1073858414526645)
- Quadrato G**, Elnagger M, **Di Giovanni S**. Adult neurogenesis in brain repair: cellular plasticity versus cellular replacement. *Front Neurosci*. 2014 Feb 12;8:17. doi: 10.3389/fnins.2014.00017.
- Schaeffer E, Pilotto A, Berg D**; Pharmacological Strategies for the Management of Levodopa-Induced Dyskinesia in Patients with Parkinson's Disease. *CNS Drugs*. 2014; (12): 1155-84
- Tabatabai G**, Hattingen E, Schlegel J, Stummer W, Schlegel U (2014). [Interdisciplinary neuro-oncology: Part 1: diagnostics and operative therapy of primary brain tumors.]. *Der Nervenarzt* 85(8): 965-75
- Tabatabai G**, Hattingen E, Schlegel J, Stummer W, Schlegel U (2014). [Interdisciplinary neuro-oncology: Part 2: systemic therapy of primary brain tumors.]. *Der Nervenarzt* 85(8): 976-81
- Walker LC, **Jucker M** (2014). Wurzeln der Demenz. *Spektrum der Wissenschaft*. März 2014: 22-7
- Ziemann U**, Reis J, Schwenkreis P, Rosanova M, Strafella A, Badawy R, **Müller-Dahlhaus F** (2014). TMS & Drugs revisited 2014. *Clin Neurophysiol* (in press, doi: 10.1016/j.clinph.2014.08.028)

## Books, book chapters and proceedings

- Beck T, Endres D, Lindner A, Giese MA;** Active sampling supported comparison of causal inference models for agency attribution in goal-directed actions. *Journal of Vision*. 2014; 14(10): 838
- Belardinelli A, Kurz JM, Kutter EF, Neumann H, **Karnath H-O**, Butz MV; Modeling simultanagnosia. In: Proceedings of the 36th Annual Conference of the Cognitive Science Society. P Bello, M Guarini, M McShane, B Scassellati (eds.). Cognitive Science Society, Austin. 2014; 1911-1916
- Chiovetto E, Endres D**, Curio C, **Giese MA**; Perceptual integration of kinematic components for the recognition of emotional facial expressions. *Journal of Vision*. 2014; 14(10): 205
- Chiovetto E, Mukovskiy A**, Reinhart F, Kansari-Zadeh MS, Billiard A, Steil JS, Giese MA; Assessment of human-likeness and naturalness of interceptive arm reaching movement accomplished by a humanoid robot. *Perception 43 ECVF Abstract Supplement*. 2014; page 107
- Ernemann U, Bender B, Ziemann U (2014). Multiple Sklerose und verwandte Erkrankungen. Jansen, Forsting (Eds.) *MRT des Zentralnervensystems*. Thieme pp. 255-273
- Fedorov L, Endres D**, Vangeneuden J, **Giese MA**; Neurodynamical model for the multi-stable perception of biological motion. *Journal of Vision*. 2014; 14(10): 1007
- Fedorov L**, Vangeneugden J, **Giese MA**; Perception of biological motion depends on lighting-from-above prior. *Perception 43 ECVF Abstract Supplement*. 2014; 104
- Giese MA, Fedorov L, Vangeneugden J**; Neurodynamical model for multi-stability and adaptation in motion recognition. *Perception 43 ECVF Abstract Supplement*. 2014; page 69
- Giese MA, Fedorov L**; Neurodynamical model for visual action recognition. *BMC Neuroscience*. 2014; 15(1): P164
- Giese MA**; Neural theory for the visual processing of goal-directed actions. *Cognitive Processing*. 2014; 15(1): S11-S12
- Giese MA**; Skeleton model for the neurodynamics of visual action representations. *Artificial Neural Networks and Machine Learning – ICANN 2014, Lecture Notes in Computer Science*, 8681. 2014; 707-714
- Ilg UJ**; Multimodal representation of target trajectory in space. *Spring School "Multisensory Perception for Action"*, Wildbad Kreuth. 2014.
- Joosten E, Giese MA**; Dynamic facial expressions are not necessarily processed holistically. *Journal of Vision*. 2014; 14(10): 566
- Karnath H-O**, Brötz D; Pusher-Syndrom. In: *Klinische Neuropsychologie – Kognitive Neurologie*. H-O Karnath, G Goldenberg, W Ziegler (Hrsg.). Thieme-Verlag, Stuttgart. 2014; 213-222
- Karnath H-O**, Goldenberg G, Ziegler W (Hrsg.); *Klinische Neuropsychologie – Kognitive Neurologie*. Thieme-Verlag, Stuttgart, 2014.
- Karnath H-O**; Anosognosie. In: *Klinische Neuropsychologie – Kognitive Neurologie*. H-O Karnath, G Goldenberg, W Ziegler (Hrsg.). Thieme-Verlag, Stuttgart. 2014; 265-271
- Karnath H-O**; Neglect. In: *Klinische Neuropsychologie – Kognitive Neurologie*. H-O Karnath, G Goldenberg, W Ziegler (Hrsg.). Thieme-Verlag, Stuttgart. 2014; 198-212
- Keller A, Meese E, Durand C, **Biskup S**. *Nucleic Acids as Molecular Diagnostics, Chapter 12: Genome, Exome, and Gene Panel Sequencing in a Clinical Setting*. Wiley-VCH Verlag GmbH & Co KGaA, 2014
- Kollmar R, **Poli S** (2014). Hypothermie als Therapiekonzept. In: Schwab S, Schellinger P, Werner C, Unterberg A, Hacke W (Eds.) *Neurointensiv*. Springer (Heidelberg); (in press)



- Kutscheidt K, Hein E, Roth MJ, Lindner A;** fMRI-evidence for a top-down grouping mechanism establishing object correspondence in the Ternus-Pikler display. *Cognitive Processing* 15 (Suppl 1). 2014; S48-S49
- Lindner A;** Learning sensory predictions for perception and action. *Cognitive Processing* 15 (Suppl 1). 2014; S19
- Maljevic S, Lerche H;** Potassium channel genes and benign familial neonatal epilepsy. In Ortrud K. Steinlein, editor: *Genetics of Epilepsy*, Vol 213, PBR, UK: Elsevier, 2014, pp. 17-53.
- Müller-Dahlhaus F, **Ziemann U** (2014). TMS und Schlaganfall. In: Bischoff C, Straube A (Eds.) *Leitlinien Klinische Neurophysiologie und funktionelle Bildgebung*. Kohlhammer GmbH, pp. 243-252
- Rennig J, Karnath H-O, Himmelbach M;** Preserved expert object recognition in a case of unilateral visual agnosia. *Cognitive Processing*. 2014; 15(1): S60-S60
- Siebner H, **Ziemann U** (2014). Transkranielle Magnetstimulation (TMS). In: Bischoff C, Straube A (Eds.) *Leitlinien Klinische Neurophysiologie und funktionelle Bildgebung*. Kohlhammer GmbH, pp. 67-75
- Srulljes K, **Maetzler W.** Progressive Supranuclear Palsy and Dementia. In: Martin C, Preedy V, editors. *Diet and Nutrition Dementia and Cognitive Decline*. Elsevier 2014
- Velychko D, **Endres D, Taubert N, Giese MA;** Coupling Gaussian process dynamical models with product-of-experts Kernels. *Artificial Neural Networks and Machine Learning – ICANN 2014, Lecture Notes in Computer Science*, 8681. 2014; 603-610
- Ziemann U** (2014). Enhancement of neuroplasticity by drug therapy. In: Dietz V, Ward N (Eds.) *Oxford Textbook of Neurorehabilitation*. Oxford University Press, Oxford, UK (in press)
- Ziemann U** (2014). Pharmaco-transcranial magnetic stimulation studies of motor excitability. In: Lozano A, Hallett M (Eds.) *Handbook of Clinical Neurology*, Vol. 116C, Elsevier BV, pp. 387-397
- Ziemann U** (2014). Transcranial Magnetic Stimulation. In: Runehov, Oviedo (Ed.) *Encyclopedia of Sciences and Religions*. Springer, pp. 2285-2289
- Ziemann U, Siebner H** (2014). Zentrale demyelinisierende Erkrankungen. In: Bischoff C, Straube A (Eds.) *Leitlinien Klinische Neurophysiologie und funktionelle Bildgebung*. Kohlhammer GmbH, pp. 256-260
- Ziemann U, Siebner H** (2014). Zervikale Myelopathie. In: Bischoff C, Straube A (Eds.) *Leitlinien Klinische Neurophysiologie und funktionelle Bildgebung*. Kohlhammer GmbH, pp. 253-255

## 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

### Printed by

Druckerei Maier GmbH, Rottenburg am Neckar

### Concept & Design

Carolin Rankin, Rankin Identity

© Center of Neurology, Tübingen, April 2015

All rights reserved

