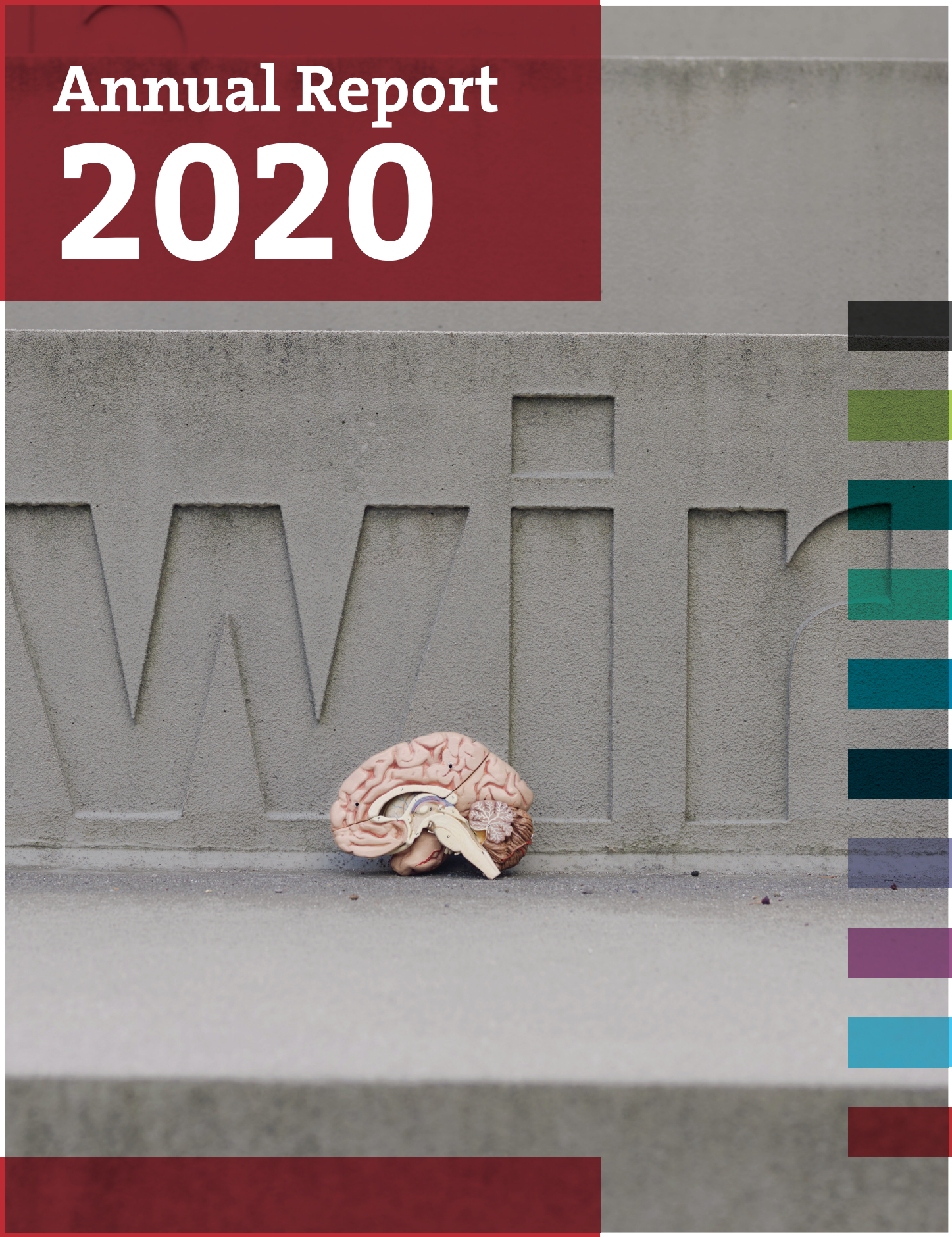
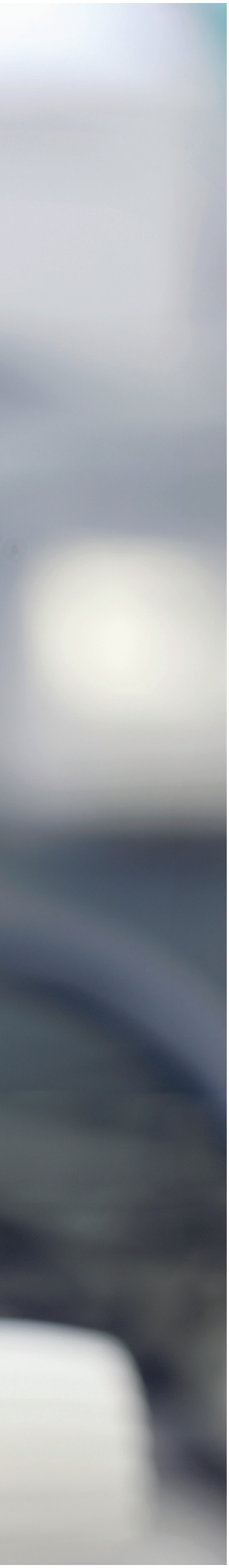
CENTER OF NEUROLOGY
TÜBINGEN

Annual Report 2020





CENTER OF NEUROLOGY TÜBINGEN

Annual Report 2020

DIRECTORS
Prof. Dr. Thomas Gasser
Prof. Dr. Mathias Jucker
Prof. Dr. Holger Lerche
Prof. Dr. Markus Siegel
Prof. Dr. Dr. Ghazaleh Tabatabai
Prof. Dr. Peter Thier
Prof. Dr. Ulf Ziemann

EBERHARD KARLS UNIVERSITÄT TÜBINGEN
Hertie-Institut für klinische Hirnforschung
Universitätsklinikum Tübingen

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The Center of Neurology in 2020

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

The Center of Neurology presently consists of six departments: the Department of Neurology with Neurovascular Medicine (Prof. Dr. Ulf Ziemann), the Department of Neurodegenerative Diseases (Prof. Dr. Thomas Gasser), the Department of Neurology and Epileptology (Prof. Dr. Holger Lerche), the Department of Neurology & Interdisciplinary Neuro-Oncology (Prof. Dr. Dr. Ghazaleh Tabatabai) and the Department of Cellular Neurology (Prof. Dr. Mathias Jucker). In the autumn of 2020, the new Department of Neural Dynamics and Magnetoencephalography (Prof. Dr. Markus Siegel) complemented the scope of the HIH and the Department of Cognitive Neurology (Prof. Dr. Peter Thier) was closed.

All departments provide patient care within the University Hospital, while their 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 distinguishes the Center of Neurology from other neuroscience institutions. In particular, the close interaction between basic science and patient care at the HIH and the University Hospital's Clinical Neurology Department was seen as a role model for clinical and translational research in Germany by the German Council of Science and Humanities (Wissenschaftsrat).

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

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 Forscherinnen und Forscher. Die besonders enge Verknüpfung von Klinik und Grundlagenforschung innerhalb jeder einzelnen Abteilung und die Department-Struktur sind fundamentale Aspekte des Hertie-Konzeptes und ein Alleinstellungsmerkmal gegenüber anderen Institutionen der Hirnforschung in Deutschland. In der Department-Struktur sind die Professorinnen und Professoren mit Leitungsfunktion akademisch und korporationsrechtlich gleichgestellt.

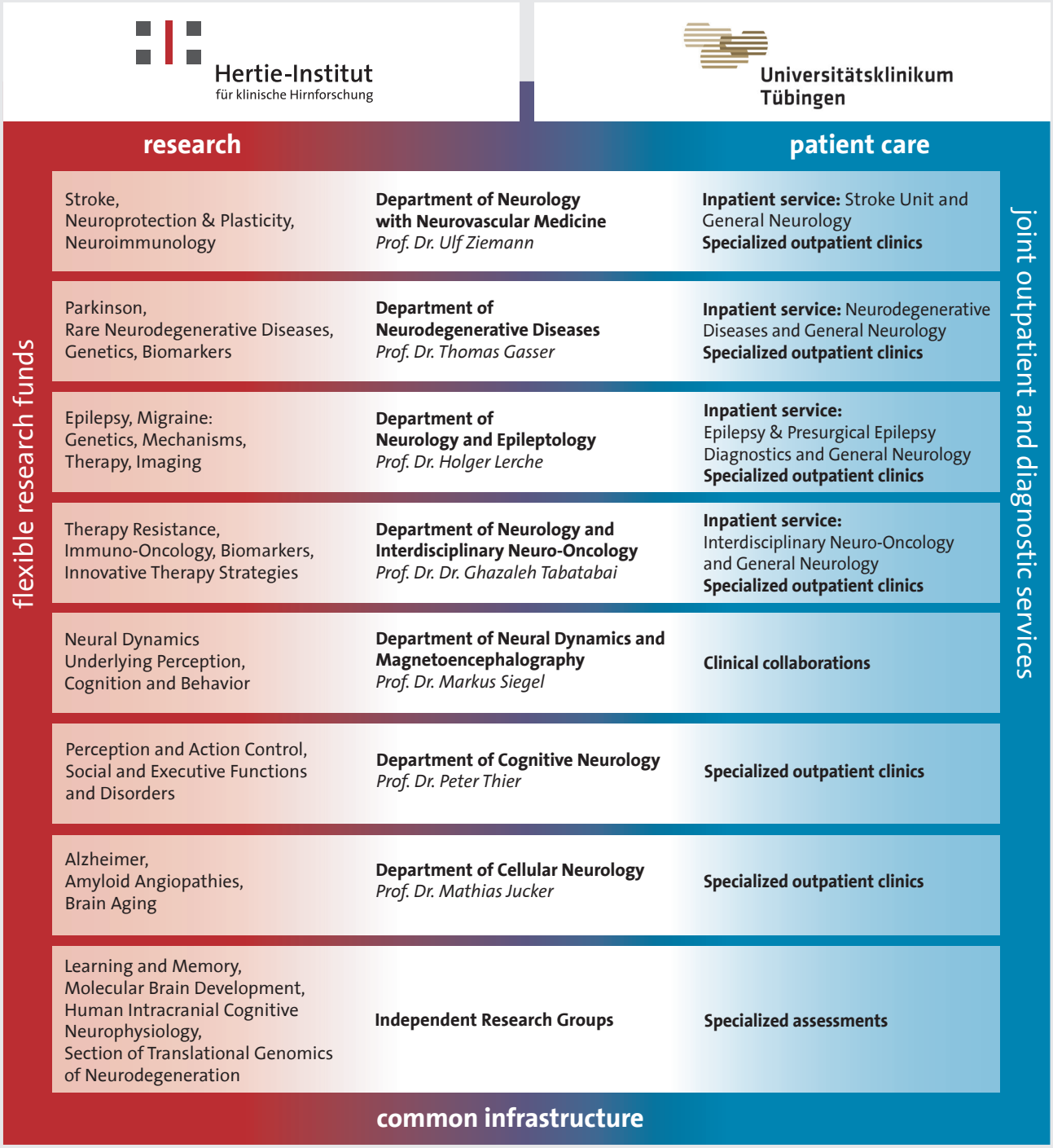
Das Zentrum besteht aus sechs Abteilungen: der Abteilung Neurologie mit Schwerpunkt neurovaskuläre Erkrankungen (Prof. Dr. Ulf Ziemann), der Abteilung Neurologie mit Schwerpunkt neurodegenerative Erkrankungen (Prof. Dr. Thomas Gasser), der Abteilung Neurologie mit Schwerpunkt Epileptologie (Prof. Dr. Holger Lerche), der Abteilung Neurologie mit interdisziplinärem Schwerpunkt Neuroonkologie (Prof. Dr. Dr. Ghazaleh Tabatabai) und der Abteilung für Zellbiologie Neurologischer Erkrankungen (Prof. Dr. Mathias Jucker). Im Herbst wurde die neue Abteilung Neuronale Dynamik und Magnetenzephalographie (Prof. Dr. Markus Siegel) gegründet und die Abteilung Kognitive Neurologie (Prof. Dr. Peter Thier) geschlossen.

Die ersten vier Genannten sind bettenführende Abteilungen in der Neurologischen Klinik, die anderen beiden sind an der Patientenversorgung im Rahmen von Spezialambulanzen beteiligt. Die klinischen Abteilungen sind für die Versorgung von Patienten mit der gesamten Breite neurologischer Erkrankungen gemeinsam verantwortlich. Die Einheit der Neurologischen Klinik in Lehre, Ausbildung und Krankenversorgung wird dabei durch eine gemeinsame Infrastruktur (Patientenaufnahme, Behandlungspfade, Poliklinik, diagnostische Labors, Bettenmanagement, Pflegedienst gesichert. Die Neurologische Klinik besteht daher nach innen und außen weiterhin als einheitliche Struktur. In den klinischen Abteilungen werden pro Jahr rund 5.500 Patientinnen und Patienten stationär und mehr als 15.000 Patientinnen und Patienten ambulant behandelt.

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

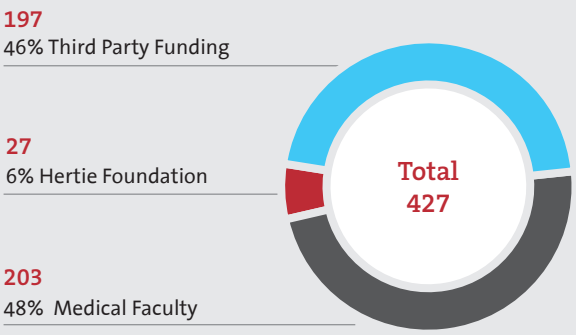
Facts & Figures

CENTER OF NEUROLOGY



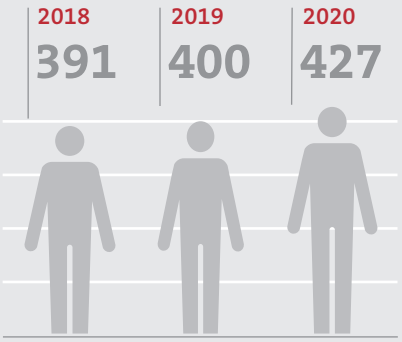
NUMBER OF STAFF IN 2020

Center of Neurology without nursing services (by headcount)



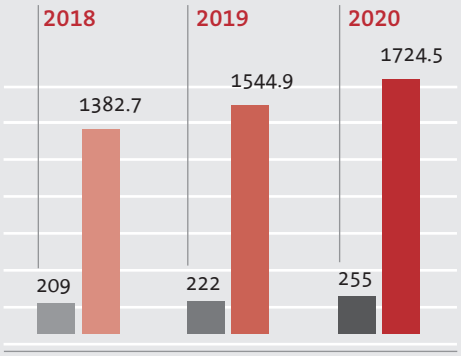
DEVELOPMENT OF STAFF

Center of Neurology (by headcount)



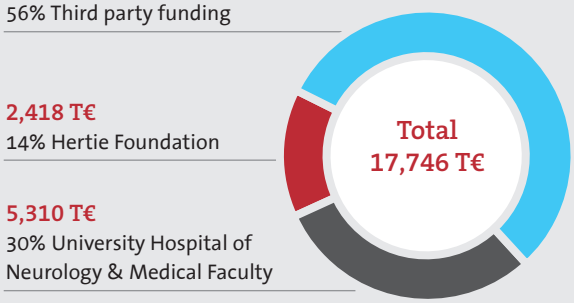
NUMBER OF PUBLICATIONS
IMPACT FACTORS

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



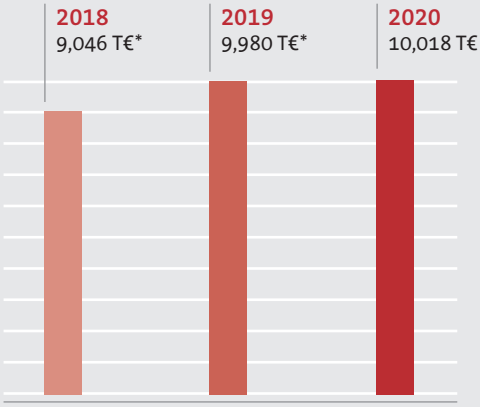
TOTAL FUNDINGS IN 2020

Center of Neurology



THIRD PARTY FUNDING

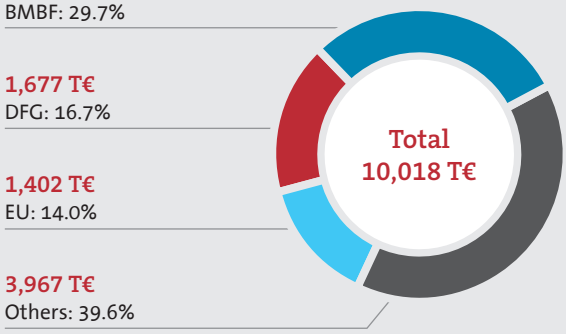
Center of Neurology



* includes 1 Mio € from the state of Baden-Württemberg

THIRD PARTY FUNDING IN 2020

Center of Neurology



University Hospital of Neurology

CLINICAL CARE

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

In the outpatient unit of the clinic more than 15,000 patients (including diagnostic procedures) are examined and treated every year, most of them in specialty clinics which are directed by recognized specialists in their respective fields.

Universitätsklinikum Tübingen

PATIENTENVERSORGUNG

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

In der neurologischen Poliklinik werden jährlich über 15.000 Patienten (inkl. diagnostischer Prozeduren) ambulant betreut, die meisten davon in Spezialambulanzen, die von ausgewiesenen Experten für die jeweiligen Erkrankungen geleitet werden.

Clinical Performance Data

Close monitoring of patients at the intensive care unit.

INPATIENT CARE

The inpatient units of the University Hospital of Neurology treated more than 5,400 patients in 2018.
Mental and behavioural disorders

NUMBER OF ADMISSIONS

5,489

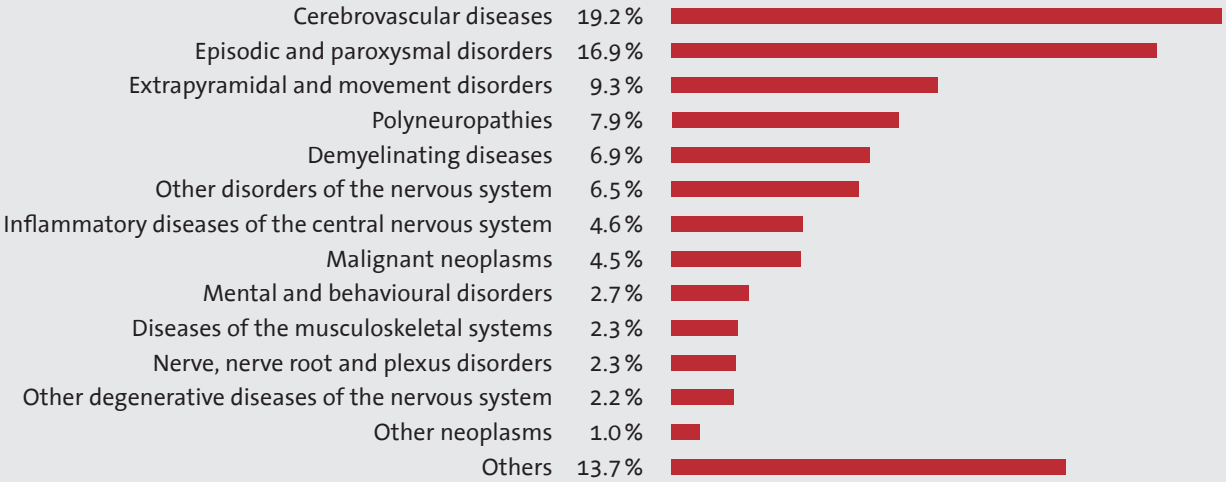
LENGTH OF STAY (IN DAYS)

4.4

CASE-MIX-INDEX

1.02

INPATIENT DIAGNOSIS GROUPS



OUTPATIENT CARE

NUMBER OF CONSULTATIONS
(including diagnostic procedures)

15,273

The Hertie Institute for Clinical Brain Research (HIH)

Hertie-Institut
für klinische Hirnforschung

Since its founding 19 years ago, the Hertie Institute has grown to more than 420 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 six departments. They combine basic and clinical research with patient care, albeit to different degrees and with variable emphasis: the four departments focusing on Stroke, Epileptology, Neurodegenerative Disorders, and Neuro-Oncology treat outpatients in specialized clinics, but also inpatients with the whole spectrum of neurological diseases, while the Departments of Neural Dynamics and Magnetoencephalography and Cellular Neurology provide specialized diagnostic services and care in an outpatient setting only, focusing on neurocognitive impairments and Alzheimer's disease, respectively.

The institute is home to a total of 21 professors and 32 research groups. Twenty-eight belong to the aforementioned departments, four are set up as independent research groups.

In 2020, scientists at the Center of Neurology obtained more than 10 million Euros in third party funding and published more than 250 papers in peer-reviewed journals.

To further advance the future strategy of the institute, the HIH hosted a virtual conference on “Emerging Perspectives in Clinical Brain Research” in October 2020. The focus of the conference were three major topics: “Molecular and Cellular Diagnosis and Therapy”, “Neuroprosthetics and Innovative Neurotechnology” and “Data Science for Clinical Brain Research”. In addition to top-class keynote speakers, the HIH invited young scientists who gave insights into their cutting edge research, followed by lively discussions and a virtual networking lounge.

Tübingen is one of six top research locations in Germany that have been granted funding in December 2019 as part of the newly initiated “Hertie Network of Excellence in Clinical Neuroscience”. The Hertie Foundation’s network and junior researcher support programme, which is funded with five million euros over a period of three years, aims to facilitate the transfer of scientific findings into clinical practice in the field of clinical neurosciences.

Prof. Dr. Thomas Gasser
Prof. Dr. Mathias Jucker
Prof. Dr. Holger Lerche
Prof. Dr. Markus Siegel
Prof. Dr. Dr. Ghazaleh Tabatabai
Prof. Dr. Peter Thier
Prof. Dr. Ulf Ziemann

Das Hertie-Institut für klinische Hirnforschung (HIH)

19 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 sechs Abteilungen: Der Abteilung Neurologie mit Schwerpunkt neurovaskuläre Erkrankungen (Prof. Dr. Ulf Ziemann), der Abteilung Neurologie mit Schwerpunkt neurodegenerative Erkrankungen (Prof. Dr. Thomas Gasser), der Abteilung Neurologie mit Schwerpunkt Epileptologie (Prof. Dr. Holger Lerche), der Abteilung Neurologie mit interdisziplinärem Schwerpunkt Neuroonkologie (Prof. Dr. Dr. Ghazaleh Tabatabai) und der Abteilung für Zellbiologie Neurologischer Erkrankungen (Prof. Dr. Mathias Jucker). Im Herbst wurde die neue Abteilung Neuronale Dynamik und Magnetenzephalographie (Prof. Dr. Markus Siegel) gegründet und die Abteilung Kognitive Neurologie (Prof. Dr. Peter Thier) geschlossen, da der Abteilungsleiter die Altersgrenze erreichte.

Die ersten vier Genannten sind bettenführende Abteilungen in der Neurologischen Klinik, die anderen beiden sind an der Patientenversorgung im Rahmen von Spezialambulanzen und speziellen diagnostischen Verfahren beteiligt. Die klinischen Abteilungen sind für die Versorgung von Patienten mit der gesamten Breite neurologischer Erkrankungen gemeinsam verantwortlich.

In den Abteilungen sind zurzeit 21 Professorinnen und Professoren und mehr als 420 Mitarbeitende in 32 Arbeitsgruppen tätig, wovon vier unabhängige Forschungsgruppen darstellen.

Die Arbeitsschwerpunkte des HIH liegen im Bereich neurodegenerativer und entzündlicher Hirnerkrankungen, der Schlaganfallforschung, Epilepsien und der Erforschung der Grundlagen und Störungen von Wahrnehmung, Motorik und Lernen. Zu den bedeutenden Forschungserfolgen des HIH zählen die Entdeckung wichtiger genetischer und molekularer Grundlagen der Entstehung und Progression neurologischer Erkrankungen und die Charakterisierung der Funktion von neuronalen Netzwerken in der Hirnfunktion. Das HIH, ein Modellprojekt für Public Private Partnership, hat auch im Jahr 2020 rund 10 Millionen Euro an Drittmitteln eingeworben und mehr als 250 Veröffentlichungen in wissenschaftlichen Fachzeitschriften publiziert. Diese Zahlen belegen die wissenschaftliche Leistungsfähigkeit des Zentrums. Die Gemeinnützige Hertie-Stiftung wendete bisher 60 Millionen Euro für das HIH auf und plant ihre Förderung fortzusetzen.

In den Abteilungen sind zurzeit 21 Professorinnen und Professoren und etwa 420 Mitarbeiternde in 32 Arbeitsgruppen tätig. Die Gemeinnützige Hertie-Stiftung wendete bisher annähernd 60 Millionen Euro für das HIH auf und plant ihre Förderung fortzusetzen.

Um die zukünftige Strategie des Instituts zu schärfen, veranstaltete das HIH im Oktober 2020 eine virtuelle Zukunftskonferenz zum Thema „Emerging Perspectives in Clinical Brain Research". Der Schwerpunkt der Konferenz lag auf drei Themen: „Molecular and Cellular Diagnosis and Therapy", „Neuroprosthetics and Innovative Neurotechnology"und „Data Science for Clinical Brain Research". Neben hochkarätigen Keynote-Sprecherinnen und Sprechern lud das HIH junge Wissenschaftlerinnen und Wissenschaftler ein, die Einblicke in ihre Forschung gaben, gefolgt von lebhaften Diskussionen und einer virtuellen Networking-Lounge.

Tübingen ist einer von deutschlandweit sechs Spitzenstandorten, die seit Dezember 2019 im Rahmen des neu initiierten „Hertie Network of Excellence in Clinical Neuroscience" gefördert werden und im Jahr 2020 ihre Arbeit aufgenommen haben. Das mit fünf Millionen Euro geförderte Netzwerk und Nachwuchsförderprogramm der Gemeinnützigen Hertie-Stiftung zielt darauf ab, im Bereich der klinischen Neurowissenschaften die Umsetzung von wissenschaftlichen Erkenntnissen in die klinische Praxis zu erleichtern.

Prof. Dr. Thomas Gasser
Prof. Dr. Mathias Jucker
Prof. Dr. Holger Lerche
Prof. Dr. Markus Siegel
Prof. Dr. Dr. Ghazaleh Tabatabai
Prof. Dr. Peter Thier
Prof. Dr. Ulf Ziemann

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Dr. Astrid Proksch

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Dr. Astrid Proksch



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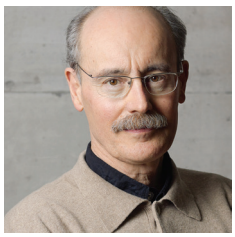

Prof. Dr. Markus Siegel
Prof. Dr. Dr. Ghazaleh Tabatabai
Prof. Dr. Peter Thier


Prof. Dr. Ulf Ziemann
Dr. Astrid Proksch

University Hospital of Neurology

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

Jürgen Weber
(Deputy Head of Nursing Services)

Adriana Hurcikova
(Deputy Head of Nursing Services)

Olga Krämer
(Division Manager, Ward 42/43/45)

Banu Sahin
(Deputy Division Manager, Ward 42/43/45)

Isaac Emwinghare
(Deputy Division Manager, Ward 42/43/45)

Gerda Weise
(Ward Manager, 44)

Annette Silber
(Deputy Ward Manager, Ward 44)

Marc-Sebastian Haug
(Deputy Ward Manager, Ward 44)

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Diana Arko
Wilfred Barete
Luther Basa
Kathrin Bauer
Meike Besser
Önder Bilen
Irene Brady
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Janina Traut
Patricija Vegel
Simon Welte

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Ann-Kathrin Schumacher

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Simone Dettinger
Christine Rebenschütz
Isabel Utsch-Sellnow

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Sandra Berger (EMG)
Fridos Bouraima (EEG)
Ingrid Braun
(Neurocardiac Diagnostics)
Margarete Dengler (Nurse)
Anke Deutsch (EP)
Evelyn Dubois (CFS Chemistry)
Maximilian Früchel
(Neurosonography)
Irina Köhnlein (Nurse)
Renate Mahle (EEG Neurosonography)
Veronika Serwotka
(Nerve conduction)
Elke Stransky (CSF Chemistry)
Kathrin Vohrer (EEG, EP)
Julia Wittlinger
(Neurosonography, EP)
Barbara Wörner (EEG)

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Ina Baumeister
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Jutta Eymann
Dagmar Heller-Schmerold
Sabrina Kreiser
Susanne Luginsland
Isolde Marterer
Christine Riegraf
Susanne Stimmler
Doris Wieder

MEDICAL DOCUMENTATION

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Heike Böpple-Höh
Horst Feuerbacher
Natascha Jurawel
Dr. Christina Lipski
Birgit Peter
Martina Pabst
Christina Tröger

Department of Neurology with Neurovascular Medicine

Clinical and Scientific Staff

HEAD OF THE DEPARTMENT

Prof. Dr. Ulf Ziemann

GROUP LEADERS/ATTENDING PHYSICIANS

Prof. Dr. Hermann Ackermann
PD Dr. Katharina Feil (since 11/2020)
Prof. Dr. Simon Greulich (Cardiologist)
PD Dr. Markus Kowarik
PD Dr. Markus Krumbholz
Prof. Dr. Arthur Melms (5%; until 07/2020)
Dr. Annerose Mengel
Prof. Dr. Ulrike Naumann
PD Dr. Sven Poli, MSc
Dr. Jörn Pomper (since 11/2020)

SCIENTISTS/RESIDENTS

Dr. Ahmed Abdelhak (until 07/2020)
Dr. Adedolapo K. Adeyemi (since 09/2020)
Dr. Yang Bai
Dr. David Baur
Dr. Paolo Belardinelli
(100% until 08/2020, 5% since 09/2002)
Dr. Til Ole Bergmann (5%)
Dr. Corinna Blum
Dr. Jutta Dünschede
Dr. Mohamed Yasser Elnaggar
Julia Göddel-Sand (since 02/2020)
Alexandra Gomez-Exposito (since 02/2020)
Dr. Pedro Caldana Gordon
Florian Härtig (until 09/2020)
Prof. Dr. Ingo Hertrich
Dr. Roswitha Kemmner (since 02/2020)
Dr. Gábor Kozák (since 02/2020)
Valentin Kusch
Dr. Kornelia Laichinger (since 07/2020)
Anne Lieb
Joshua Mbroh (since 05/2020)
Dr. Johanna Metsomaa
Dr. Elisa Pichler
Dr. Khouloud Poli
Dr. Christine Rösinger-Hein (since 11/2020)
Dr. Christoph Ruschil
Dr. Jennifer Sartor
Patricia Schwarz
Vera Stadler
Maria-Ioanna Stefanou (until 09/2020)
Dr. Johannes Tünnerhoff
Dr. Brigitte Zrenner
Dr. Christoph Zrenner

TECHNICAL STAFF/ADMINISTRATION

Marcel Armbruster
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Dipl.-Ing. Rüdiger Berndt (Electronics, together with the Department of Cognitive Neurology)
Ingrid Braun
Evelyn Dubois
Sandra Friesch
Sandra Gäßler-Kegelmann, MBA
Sarah Hendel
Anna Kempf
Gabriele Kuebart
Ivana Princip
Natalie Rumpel (50%, since 10/2020)
Matthias Scholl
Elke Stransky
Julia Zeller

PHD STUDENTS

Debora Desideri (Supervisor Prof. Dr. Ziemann)
Ali El-Ayoubi (Supervisor Prof. Dr. Naumann)
Maria Ermolova (Supervisor Prof. Dr. Ziemann)
Desiree Blair Jovellar (Supervisor Prof. Dr. Ziemann)
Constanze Kemmerer (Supervisor: PD Dr. Kowarik)
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Nikhil Ranjan (Supervisor Prof. Dr. Naumann)
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David Emanuel Vetter (Supervisor Prof. Dr. Ziemann)
Yi Wang (Supervisor PD Dr. Poli)

MASTER STUDENTS

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Laura Neumann (Supervisor PD Dr. Markus Kowarik)
Demet Tanriverdi (Supervisor Prof. Dr. Hertrich)

MEDICAL DOCTORAL STUDENTS

Abdullah Alekuzei (Supervisor Prof. Dr. Naumann)
Dominik Baku (Supervisor PD Dr. Kowarik)
Sinan Barus (Supervisor Prof. Dr. Ziemann)
Lena Beller (Supervisor PD Dr. Krumbholz)
Sara Dörre (Supervisor Prof. Dr. Ziemann)
Hermann Eckhardt (Supervisor Prof. Dr. Naumann)
Lukas Gaßmann (Supervisor Prof. Dr. Ziemann)
Katharina Hadaschik (Supervisor PD Dr. Poli)
Yeho-Irae Kim (Supervisor Prof. Dr. Ziemann)
Franca Sophie König (Supervisor Prof. Dr. Ziemann)
Hannah Krämer (Supervisor Prof. Dr. Ziemann)
Chen Liang (Supervisor Prof. Dr. Ziemann)
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Mirjam Lingel (Supervisor Prof. Dr. Ziemann)
Adam Meder (Supervisor Prof. Dr. Ziemann)
Hardy Richter (Supervisor PD Dr. Poli)
Michael Schlotterbeck (PD Dr. Krumbholz)
Leonie Schumacher (Supervisor Prof. Dr. Naumann)
Matthias Sonnleitner (Supervisor PD Dr. Poli)
Charlotte Spencer (Supervisor PD Dr. Poli)
Mareike Spieker (Supervisor Prof. Dr. Ziemann)
Jakob Spogis (Supervisor Prof. Dr. Ziemann)
Marianna Stefanou (Supervisor Prof. Dr. Ziemann)
Miriam Thies (Supervisor Prof. Dr. Ziemann)
Dimitrios Vasilakis (Supervisor PD Dr. Poli)
Xueyu Yang (Supervisor PD Dr. Poli)
Jan Zurloh (Supervisors: PD Dr. Krumbholz, Dr. Mengel)

PROFESSORSHIP FOR NEUROREHABILITATION

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

Clinical Studies

STROKE STUDIES

ANNEXA-4: Prospective, open-label study of Andexanet alfa in patients receiving a factor XA-Inhibitor who have acute major bleeding
Investigator: PD Dr. Sven Poli

ANNEXA-i: A Phase 4 randomizes clinical trial of Andexanet Alfa (Andexanet Alfa for Injection) in acute intracranial hemorrhage in patients receiving an oral Factor XA Inhibitor
Investigator: PD Dr. Sven Poli

APICES: Automatic PredICtion of Edema after Stroke (APICES) – Computergestützte automatische Prognose der Entwicklung eines malignen Hirnödems nach Mediainfarkt
Investigator: PD Dr. Sven Poli

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

AXIOMATIC-SSP: A Global, Phase 2, Randomized, Double-Blind, Placebo-Controlled, Dose-Ranging Study of BMS-986177, an Oral Factor XIa Inhibitor, for the Prevention of New Ischemic Stroke or New Covert Brain Infarction in Patients Receiving Aspirin and Clopidogrel Following Acute Ischemic Stroke or Transient Ischemic Attack (TIA)
Investigator: PD Dr. Sven Poli

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

ELAN: Early versus Late initiation of direct oral Anticoagulants in post-ischemic stroke patients with atrial fibrillation (ELAN): an international, multicenter, randomized-controlled, two-arm, assessor-blinded trial
Investigator: PD Dr. Sven Poli

German Stroke Registry
Investigator: PD Dr. Sven Poli

Pacific-Stroke: Phase 2 Program of AntiCoagulation via Inhibition of FXIa by the oral Compound BAY 2433334 – non-cardioembolic STROKE study
Investigator: PD Dr. Sven Poli

PRAISE: Prediction of acute coronary syndrome in acute ischemic stroke
Investigator: Dr. Annerose Mengel

Precious: PREvention of Complications to Improve OUtcome in elderly patients with acute Stroke. A randomised, open, phase III, clinical trial with blinded outcome assessment
Investigator: PD Dr. Sven Poli

PRESTIGE-AF: PREvention of STroke in Intracerebral haemorrhaGE survivors with Atrial Fibrillation
Investigator: PD Dr. Sven Poli

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

PROOF: Penumbral Rescue by Normobaric O=O Administration in Patients with Ischaemic Stroke and Target Mismatch ProFile: A Phase II Proof-of-Concept Trial
Investigator: PD Dr. Sven Poli

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

RIC-ICH: Register zum Einsatz von Idarucizumab bei Patienten mit intrakranieller Blutung
Investigator: PD Dr. Sven Poli

SANO: Strukturierte ambulante Nachsorge nach Schlaganfall
Investigator: PD Dr. Sven Poli

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

STREAM (ClinicalTrials.gov Identifier: NCT03228251): Simulation-based Training of Rapid Evaluation and Management for Acute Stroke Trial
Investigator: PD Dr. Sven Poli

TESTdem: Feststellung der Wirksamkeit und Sicherheit der Transkraniellen Extrakorporalen Stoßwellen-Therapie bei Patienten mit einer Alzheimer-Demenz
Investigator: PD Dr. Sven Poli

NEUROIMMUNOLOGY STUDIES

AFFINITY (NCT03222973, 215MS202):
Efficacy and Safety of BIIB033 (Opicinumab) as an Add-on Therapy to Disease-Modifying Therapies (DMTs) in Relapsing Multiple Sclerosis (MS)
Investigator: PD Dr. Markus Krumbholz

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

CFTY720DDE02 PANGAEA (NIS – Phase 4):
Multizentrische, prospektive, nicht-interventionelle Langzeit-Registerstudie zur Beschreibung der Sicherheit und des Stellenwerts von Gilenya® (fingolimod 0.5 mg) in der Behandlung von MS Patienten
Investigator: PD Dr. Markus Krumbholz

CLADQoL (MS700568): CLADribine tablets – evaluation of Quality of Life
Investigator: PD Dr. Markus Kowarik

CLARION (MS 700568-0002) (NIS – Phase 4):
Long term, prospective, observational cohort study evaluating the safety profile in patients with highly active relapsing multiple sclerosis (RMS) newly started on oral cladribine
Investigator: PD Dr. Markus Krumbholz

CONFIDENCE (ML39632): Safety and effectiveness of ocrelizumab under real world conditions:
a non-interventional post authorization safety study in patients diagnosed with relapsing or primary progressive multiple sclerosis
Investigator: PD Dr. Markus Kowarik

DIFUTURE/ProVal-MS – BMBF-supported, Prospective study to validate a multidimensional risk score (DIFUTURE-MSRS) which predicts the 24-month outcome in early Multiple Sclerosis patients)
Investigator Tübingen: Prof. Dr. Ulf Ziemann

EmBioPro-MS: Explorative study of emerging blood biomarkers in progressive multiple sclerosis
Investigators: Dr. Ahmed Abdelhak, PD Dr. Markus Krumbholz

ENSEMBLE (EudraCT Nr: 2016-002937-31:
This is a prospective, multicenter, open-label, single-arm, phase 3b study which evaluates effectiveness and safety of ocrelizumab in participants with early stage RRMS. The study will consist of an open-label treatment period of 192 weeks and follow-up period of at least 48 weeks
Investigator: Prof. Dr. Ulf Ziemann

Ensemble-Plus (NCT03606460): A Study to Evaluate the Safety of Administering Ocrelizumab Per a Shorter Infusion Protocol in Participants With Primary Progressive Multiple Sclerosis (PPMS) and Relapsing Multiple Sclerosis (RMS)
Investigator: Prof. Dr. Ulf Ziemann

Evolution (MS200527_0082): A Phase III, Multicenter, Randomized, Parallel Group, Double Blind, Double Dummy, Active Controlled Study of Evobrutinib Compared with Teriflunomide, in Participants with Relapsing Multiple Sclerosis to Evaluate Efficacy and Safety
Investigator: PD Dr. Markus Kowarik

Pangaea 2.0 (CFTY720DDE26): Post-Authorization Non-interventional GermAn treatment benefit study of GilEnyA in MS)
Investigator: PD Dr. Markus Krumbholz

PROFILE RRMS (ML39348): Evaluation of specific unmet needs in current clinical practice of multiple sclerosis: characterization of different profiles of relapsing-remitting multiple sclerosis patients defined by disease activity and patient-reported outcomes
Investigator: PD Dr. Markus Kowarik

Raise / Raise-XT (RA101495-02.301): A Phase 3, Multicenter, Randomized, Double-Blind, Placebo-Controlled Study to Confirm the Safety, Tolerability, and Efficacy of Zilucoplan in Subjects with Generalized Myasthenia Gravis
Investigator: Prof. Dr. Ulf Ziemann

REGIMS Register: Ein Immuntherapieregister zur Verbesserung der Arzneimittelsicherheit in der MS-Therapie
Investigator: PD Dr. Markus Krumbholz

Clinical Studies

NEUROIMMUNOLOGY STUDIES

RETRO (ML39631): A retrospective study investigating best supportive and medical care in clinical practice in patients with primary progressive multiple sclerosis (PPMS) in Germany
Investigator: PD Dr. Markus Krumbholz

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

Third-Party Funding

ONGOING GRANTS

Explorative study of emerging blood biomarkers in progressive multiple sclerosis (EmBioProMS)
Project leader: Dr. Ahmed Abdelhak
Funding Institution: Deutsche Multiple Sklerose Gesellschaft (DMSG)

Pre-stimulus µ-rhythm phase differentially effects low-frequency repetitive TMS-induced corticospinal excitability
Project leader: Dr. David Baur
Funding institution: Medical Faculty University Tübingen, Junior Clinician Scientist Program

The sensorimotor µ-rhythm as cholinergically controlled pulsed inhibition
Project leader: Dr. Til Ole Bergmann
Funding institution: German Research Foundation (DFG)

The role of B cells in patients with gliomas: B cell associated immuno-surveillance in the CNS?
Project leader: PD Dr. Markus Kowarik
Funding Institution: Medical Faculty University Tübingen, fortüne Program

Immunoglobulin (Ig) repertoire analysis in multiple sclerosis patients treated with cladribine (Mavenclad) - A combined Ig transcriptome and proteome approach -
Project leader: PD Dr. Markus Kowarik
Funding Institution: Merck GmbH

Immunoglobulin (Ig) repertoire analysis in multiple sclerosis patients treated with teriflunomid (Aubagio) – A combined Ig transcriptome and proteome approach
Project leader: PD Dr. Markus Kowarik
Funding Institution: Genzyme

Cardiac Autonomic Function for Risk Prediction in Cryptogenic Stroke (CRYPTIC-Study)
Project leaders: Prof. Dr. Christine Meyer-Zürn, PD Dr. Sven Poli, Prof. Dr. Jennifer Diedler
Funding institution: Medtronic

The role of MTUS/ATIP1 in glioblastoma progression and invasion
Project leader: Prof. Dr. Ulrike Naumann
Funding institution: DAAD

Assessment of YB-1 Dependent Oncolytic Adenovirus-Based Glioma-Virotherapy on Cellular Immune Responses
(NA 770/4-1)
Project leader: Prof. Dr. Ulrike Naumann
Funding institution: German Research Foundation (DFG)

Der Einfluss des EMT-Proteins SLUG auf die Integrität der Blut-Hirn-Schranke im GBM - in vitro Analysen
Project leader: Prof. Dr. Ulrike Naumann
Funding institution: IZKF Promotionskolleg

Untersuchungen zum Einfluss von gliom-sezerniertem TGF-ß auf die Struktur Gliom-assoziierter Gefäße: Erstellung von murinen TGF-ß^{KO} Gliomzellen mittels CRISPR/Cas und Charakterisierung der Zelllinien
Project leader: Prof. Dr. Ulrike Naumann
Funding institution: IZKF Promotionskolleg

Intranasal delivery of cellular "Trojan Horse" cells loaded with oncolytic adenovirus to treat invasive recurrent glioblastoma
Project leader: Prof. Dr. Ulrike Naumann
Funding institution: German Cancer Foundation

Automatic PredICtion of Edema after Stroke (APICES)
Project leader: PD Dr. Sven Poli
Funding institution: Innovationsausschuss beim Gemeinsamen Bundesausschuss (GBA)

Specific Point-of-Care Testing of Coagulation In Patients Treated with Edoxaban (SPOCT-Edoxaban)
Project leader: PD Dr. Sven Poli
Funding institution: Daiichi Sankyo

Penumbral Rescue by normobaric O=O Administration in patients with ischemic Stroke and target mismatch profile:
A phase II Proof-of-Concept Trial
Project leader: PD Dr. Sven Poli
Funding institution: European Commission

Immunoglobuline repertoire analysis in multiple sclerosis
Project leader: Dr. Christoph Ruschil
Funding Institution: Medical Faculty University Tübingen, PATE Program

Apixaban for treatment of embolic stroke of undetermined source (ATTICUS randomized trial)
Project leaders: Prof. Dr. Tobias Geisler, Prof. Dr. Ulf Ziemann
Funding institution: Bristol-Myers Squibbs

Reconnecting the ageing brain to enhance plasticity and motor learning
Project leaders: Prof. Dr. John Semmler (Adelaide University), Co-PI: Prof. Dr. Ulf Ziemann
Funding institution: Australian Research Council (ARC)

Transcranial magnetic stimulation; Electroencephalography; TMS-EEG; human cortex; excitability; neuropharmacology; glutamatergic system; GABAergic system; voltage-gated ion channels; anticonvulsants (ZI 542/9-1)
Project leader: Prof. Dr. Ulf Ziemann
Funding institution: German Research Foundation (DFG)

DIFUTURE/ProVal-MS – Prospective study to validate a multidimensional risk score (DIFUTURE-MSRS) which predicts the 24-month outcome in early Multiple Sclerosis patients)
Clinical project leader Tübingen: Prof. Dr. Ulf Ziemann
Funding institution: Federal Ministry of Education and Research (BMBF)

Connecting to the Networks of the Human Brain (ConnectToBrain)
Project leaders: Prof. Dr. Ulf Ziemann, Prof. Dr. Risto Ilmoniemi (Aalto University, Finland), Prof. Dr. Gian-Luca Romani (Universita degli studi Gabriele d'Annunzio di Chieti-Pescara, Italy)
Funding Institution: European Research Council (ERC) Synergy Program

EXIST Forschungstransfer: NEUROSYNC
Project leader: Dr. Christoph Zrenner
Funding institution: Federal Ministry of Education and Research (BMBF)

Induction of brain plasticity with closed-loop EEG-triggered transcranial magnetic stimulation
Project leader: Dr. Christoph Zrenner
Funding institution: Medical Faculty University Tübingen, Clinician Scientist Program

Third-Party Funding

NEW GRANTS

Immunoglobulin repertoire analysis in multiple sclerosis
Project leader: Dr. Christoph Ruschil
Funding institution: Medical Faculty University Tübingen, PATE Program

Intravenous thrombolysis in patients with low NIHSS, retrospective analysis and prospective cohort study
Project leaders: Dr. Jennifer Sartor-Pfeiffer / Dr. Annerose Mengel
Funding institution: Medical Faculty University Tübingen, Junior Clinician Scientist Program

Personalisierte neurorehabilitative Präzisionsmedizin: Von Daten zu Therapien
Project leader: Prof. Dr. Ulf Ziemann
Funding Institution: Ministry of Research and Arts (MWK), Federal State of Baden-Württemberg

Electroencephalographical signatures in cerebral cortex evoked by cerebellar transcranial magnetic stimulation (CERETEP)
Project leader: Prof. Dr. Ulf Ziemann
Funding Institution: Takeda Pharmaceutical Company Limited, USA

EXIST-Forschungstransfer: NEUROSYNC2
Project leader: Dr. Christoph Zrenner
Funding institution: Federal Ministry of Education and Research (BMBF)

Awards

Prof. Dr. Ulf Ziemann
Listing "Top Physicians 2020" (Guter Rat)

Prof. Dr. Ulf Ziemann
Web of Science™: Highly Cited Researcher 2020

Conferences & Workshops

64th annual meeting of the German Society of Clinical Neurophysiology and Neuroimaging (DGKN)
Virtual Meeting, 12-14 November 2020
President: Prof. Dr. Ulf Ziemann

7th International Congress of Non-Invasive Brain Stimulation
Virtual Meeting, 10-14 November 2020
Organizers: Prof. Dr. Walter Paulus, Prof. Dr. Yoshikazu Ugawa, Prof. Dr. Ulf Ziemann

PhD Theses

(Completed in 2020)

Debora Desideri
Dependency of non-invasive brain stimulation effects on real-time EEG-based measurements of instantaneous excitability in human motor cortex
Supervisor: Prof. Dr. Ulf Ziemann

MD Theses
(Completed in 2020)

Hanna Faber
Cooperative noninvasive brain stimulation to induce long-term motor plasticity
Supervisor: Prof. Dr. Ulf Ziemann

Ilona Heldmaier (nee Hoberg)
Langzeitprognose nach Angioplastie und Stentung von Stenosen intrakranieller Arterien
Supervisor: PD Dr. Felix Bischof

Franca Sophie König
TMS-EEG signatures of glutamatergic neurotransmission in human cortex
Supervisor: Prof. Dr. Ulf Ziemann

Carmen Sandra Reiser
Stimulation der Mechanorezeptoren peripherer Nerven durch mechanische taktile Stimulation (mechanischer Impuls, Vibration, Druck, Berührung) und Ableitung somatosensorisch evozierter Potenziale (SEP): Anwendung zur elektrophysiologischen Frühdiagnostik zentraler sensibler Störungen am Beispiel der Multiplen Sklerose
Supervisor: Prof. Dr. Ulf Ziemann

Francesca Russo
Effekte der systemischen Hypothermie und der Kombination von systemischer Hypothermie und normobarer Sauerstofftherapie in einem tierexperimentellen Modell der transienten fokalen zerebralen Ischämie
Supervisor: PD Dr. Sven Poli

Matthias Völkner
Versorgungsqualität von Schlaganfallpatienten in einer ländlichen lokalen Stroke Unit am Beispiel der Kliniken Calw
Supervisor: Prof. Dr. Ulf Ziemann

Master Theses
(Completed in 2020)

Marie-Theres Evers
In vitro lentiviral, CRISPRmediated knockout of SLUG in mouse brain vascular pericytes
Supervisor: Prof. Dr. Ulrike Naumann

Dragana Galevska
Morphological and functional biomarkers to predict response to therapeutic brain stimulation in chronic stroke patients
Supervisor: Prof. Dr. Ulf Ziemann

Bachelor Theses
(Completed in 2020

Franziska Renz
EEG-based predictive markers of treatment response in chronic stroke
Supervisor: Prof. Dr. Ulf Ziemann

Akari Osaka
Der Einfluss der Muttersprache „Japanisch“ auf das Erlernen der deutschen Sprache als Zweitsprache
Supervisor: Prof. Dr. Ingo Hertrich

Guest Researchers

Prof. Laura Marzetti and Prof. Vittorio Pizzella,
Gabriele d’Annunzio University of Chieti-Pescara, Italy
(Funded by the ERC Synergy Grant “ConnectToBrain”)
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

Prof. Dr. Niels Focke (partially affiliated)
Prof. Dr. Tobias Freilinger (partially affiliated)
Prof. Dr. Alexander Grimm
Dr. Pascal Martin
Dr. Melanie Schreiber
PD Dr. Sigrid Schuh-Hofer
Prof. Dr. Yvonne Weber (partially affiliated)
Dr. Stefan Wolking (until 03/2020)

SCIENTISTS/RESIDENTS

Murtadha Alshabaan
Katharina Berger
Dr. Christian Boßelmann
Dr. Nele Dammeier
Dr. Ahmed Eltokhi
Dr. Samira Hamzehian
Dr. Ulrike Hedrich-Klimosch
Dr. Yiwen Li Hegner
Dr. Dr. Randolph Helfrich
Dr. Josua Kegele
Dr. Silke Klamer
Benedict Kleiser
Magdalena Kramer
Cornelius Kronlage
Robert Lauerer-Braun
Dr. Stephan Lauxmann
Dr. Stefanie Liebe
Dr. Yuanyuan Liu
Dr. Justus Marquetand
Peter Müller
Filip Rosa
Dr. Victoria Ruschil
Dr. Laura Schurr
Dr. Niklas Schwarz
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Dr. Stephanie Straub
Dr. Sabine Thewes
Dr. Nathalie Winter
Dr. Sophia Willikens
Dr. Thomas Wuttke

TECHNICAL STAFF/ ADMINISTRATION

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Merle Harrer
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Sabrina Kreiser
Heidrun Löffler
Dominque Quetting
Sarah Rau
Natalie Rumpel
Elisabeth Schriewer

MD/PHD STUDENTS

Jacqueline Bahr
Erva Bayraktar
Carolin Fischer
Moritz Hanke
Haosi Huang
Mahmoud Koko Musa
Raviteja Kotikalapudi
Johanna Krüger
Nicole Kusch
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Pauline Scheuber
Hannah Schwarz
Lukas Sonnenberg
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Ruth-Lisa Vial
Nan Zhang

INTERNSHIPS

Albina Farkhutdinova
Supervisors: Simone Seiffert, Dr. Ulrike Hedrich

Emilio Pardo-Gonzalez
Supervisors: Johanna Krüger, Dr. Ulrike Hedrich

Meret Saile
Supervisors: Nikolas Layer, Dr. Ulrike Hedrich

Zeynep Yentur
Supervisors: Betül Uysal, Dr. Ulrike Hedrich

Clinical Studies

LIBERTY / CAMG334A2301 – a 12-week double-blind, randomized, multicenter study comparing the efficacy and safety of once monthly subcutaneous 140 mg AMG 334 against placebo in adult episodic migraine patients who have failed 2-4 prophylactic treatments
Investigators: Prof. Dr. Tobias Freilinger, Prof. Dr. Holger Lerche

HeMiLa – Prophylactic treatment of hemiplegic migraine with lamotrigine
Investigators: Prof. Dr. Tobias Freilinger, Prof. Dr. Holger Lerche

ARISE / EP0091 – A randomized, double-blind, placebo-controlled, dose finding study to evaluate the efficacy and safety of padsevonil as adjunctive treatment of focal-onset seizures in adult subjects with drug-resistant epilepsy
Investigators: Prof. Dr. Yvonne Weber, Prof. Dr. Holger Lerche

EP0093 - an open-label, multicenter, extension study to evaluate the safety and efficacy of padsevonil as adjunctive treatment of focal-onset seizures in adult subjects with drug-resistant epilepsy
Investigators: Prof. Dr. Yvonne Weber, Prof. Dr. Holger Lerche

Clinical Studies

HerMes / CAMG334ADE01 - a randomized, double-blind, multicenter head-to-head study of erenumab against topiramate - migraine study to assess tolerability and efficacy in a patient-centered setting
Investigator: Prof. Dr. Holger Lerche

Spectre / CAMG334ADE02 - Characerisation of prescription patterns In episodic and chronic migraine patients starting treatment in a reallife setting with erenumab in Germany
Investigator: Prof. Dr. Holger Lerche

Apollon / CAMG334ADE03 - Assessment of Prolonged safety and tOLerability of erenumab in migraine patients in a Long-term OpeN-label study
Investigator: Prof. Dr. Holger Lerche

BIA-2093-213 - prevention of epilepsy in stroke patients at high risk of developing unprovoked seizures: anti-epileptogenic effects of eslicarbazepine acetate
Investigator: Prof. Dr. Holger Lerche

ELEVATE / XPF-008-201 - A Randomized, Double-blind, Placebo-controlled, Multicenter Study to Evaluate the Safety, Tolerability and Efficacy of XEN1101 as Adjunctive Therapy in Focal-onset Epilepsy, with an Open-label Extension
Investigator: Prof. Dr. Holger Lerche

PIMIDES I / CV08-017 - A pilot study to assess the feasibility of patient-controlled neurostimulation with the EASEE® System to treat medically refractory focal epilepsy
Investigator: Dr. Josua Kegele

ToSEE - Treatment of Established Status Epilepticus in the Elderly - a prospective, randomized, double-blind comparative effectiveness trial
Investigator: Prof. Dr. Holger Lerche

PERPRISE / E2007-M049-509 - A prospective non-interventional study evaluating the effectiveness of perampanel (Fycompa®) as only add-on treatment in patients with primary or secondarily generalized tonic-clonic seizures
Investigator: Prof. Dr. Holger Lerche

FINESSE / TV48125-MH-40148 - Prospective observational study of Fremanezumab (Ajovy™) effectiveness in chronic and episodic migraine patients in clinical routine
Investigator: Prof. Dr. Sigrid Schuh-Hofer

TRIUMPH / I5Q-MC-B004 - preventive TReatment of mIgraine: oUtcoMes for Patients in real-world Healthcare systems
Investigator: Prof. Dr. Sigrid Schuh-Hofer

TUNAP – Studie zur Evaluierung der Rolle des Nervenultraschalls bei Nerventraumata
Investigators: Prof. Dr. Alexander Grimm, Dr. Nathalie Winter, Dr. Martin Schuhmann (Neurochirurgie), Prof. Dr. Adrien Daigeler (BGU Tübingen), Jan-Hendrik Stahl, Dr. Josua Kegele, Dr. Sophia Willlikens, Julia Wittlinger

UPSS – Pattern Analysis bei Neuropathien
Investigators: Prof. Dr. Alexander Grimm, Dr. Nathalie Winter, Jan-Hendrik Stahl, Dr. Josua Kegele, Dr. Sophia Willlikens, Julia Wittlinger, Debora Vittore-Welliong

MUSS – Muskelsummenscore zur Evaluierung der Muskelfibrose bei Neuropathien
Investigators: Prof. Dr. Alexander Grimm, Dr. Nathalie Winter

Follow-Up PNP - Ultrasound, electrophysiology and clinical follow-up study of patients with Immune-mediated neuropathies (in cooperation with CSL Behring)
Investigators: Prof. Dr. Alexander Grimm, Dr. Nathalie Winter, Jan-Hendrik Stahl, Dr. Josua Kegele, Dr. Sophia Willlikens, Julia Wittlinger

Ultrasound in inherited neuropathies and TTR-Amyloidosis - ultrasound aspects of hereditary neuropathies
Investigators: Prof. Dr. Alexander Grimm, Dr. Nathalie Winter, Jan-Hendrik Stahl, Dr. Josua Kegele, Dr. Sophia Willlikens, Julia Wittlinger, Debora Vittore-Welliong

Tram2 – Screening for TTR-Amyloiosis in patients with axonal neuropathy (in cooperation with Centogene Rostock)
Investigators: Prof. Dr. Alexander Grimm, Dr. Nathalie Winter, Jan-Hendrik Stahl, Dr. Josua Kegele, Dr. Sophia Willlikens, Julia Wittlinger, Debora Vittore-Welliong

I-Guide – Follow-Up Study of CIDP and MMN patients with treatment of ivIG (in cooperation with Grifols)
Investigators: Prof. Dr. Alexander Grimm, Dr. Nathalie Winter, Jan-Hendrik Stahl, Dr. Josua Kegele, Dr. Sophia Willlikens, Julia Wittlinger

Third-Party Funding

ONGOING GRANTS

Pathophysiology of familial hemiplegic migraine: Examination of a newly developed transgenic SCNC1A mouse model
Project leader: Prof. Dr. Tobias Freilinger
Funding institution: German Research Foundation (DFG)

Pathophysiology-triggered therapy of epileptic encephalopathies
Project leader: Prof. Dr. Yvonne Weber
Funding institution: AKF (Angewandte Klinische Forschung), University of Tübingen

Prophylactic treatment of hemiplegic migraine with lamotrigine – a pilot study
Project leader: Prof. Dr. Tobias Freilinger
Funding institutions: Centre for Rare Diseases, Tübingen; AKF (Angewandte Klinische Forschung), University of Tübingen

DAAD PhD Stipendium
Project participant: Mahmoud Koko
Funding institution: DAAD

Network-Imaging in genetic epilepsy
Project leader: Prof. Dr. Niels Focke
Funding Institution: German Research Foundation (DFG) (FO 750/5-1)

Non-invasive vagal nerve stimulation (nVNS) for acute treatment of prolonged aura in hemiplegic migraine – an open-label, single-arm, multiple attack pilot trial
Project leader: Prof. Dr. Tobias Freilinger
Funding institution: Centre for Rare Diseases, Tübingen

Trimodale Bildgebung humaner Hirnnetzwerke mittels simultaner PET/MR/EEG
Project leader: Prof. Dr. Niels Focke (with Prof. Dr. Christian la Fougere and Prof. Dr. Bernd Pichler)
Funding Institution: German Research Foundation (DFG)

Effect of Eslicarbazepine on genetic gain-of-function mutations in voltage-gated Na+ channels causing epilepsies in young children
Project leaders: Prof. Dr. Holger Lerche, Dr. Stephan Lauxmann
Funding Institution: Bial

Neurological Clinical Problem Solving (Neuro-CliPS) Tübingen
Project leader: Prof. Dr. Tobias Freilinger
Funding institution: University of Tuebingen, PROFIL programme

Guest Physician Stipend
Project participant: Murtadha Alshabaan
Funding institution: Saudi-Arabia

Spreading of pathological activity in critical brainstem centers and activation measured in vivo in a Dravet mouse Model
Project leader: Dr. Henner Koch
Funding institution: Finding a Cure for Epilepsy and Seizures (FACES)

DFG-Research Unit FOR2715 'Epileptogenesis of genetic epilepsies'
Speaker: Prof. Dr. Holger Lerche
Funding institution: German Research Foundation (DFG), additional funding by the FNR (Luxembourg): including the following five grants:

P1: Genetic mechanisms of epileptic encephalopathies
Project leader: Prof. Dr. Yvonne Weber
(with Prof. Dr. Ingo Helbig from Kiel University)

P2: Rare genetic factors in epileptogenesis
Project leader: Prof. Dr. Holger Lerche
(with Prof. Dr. Michael Nothnagel from Cologne University and Dr. Roland Krause from Luxembourg University)

P5: Brain region-specific epileptogenesis in a conditional mouse model
Project leaders: Prof. Dr. Holger Lerche, Dr. Henner Koch, Dr. Thomas Wuttke

P6: Mechanisms of epileptogenesis in KCNA2-/SCN2A-mediated epilepsies
Project leader: Dr. Ulrike Hedrich
(with Prof. Dr. Olga Garaschuk from Tübingen University)

Z3: Central Management
Project leaders: Prof. Dr. Holger Lerche, Dr. Ulrike Hedrich, Dr. Henner Koch (UK Aachen)

Third-Party Funding

ONGOING GRANTS

Entwicklung eines Anfallsdetektors
Project leader: Prof. Dr. Yvonne Weber
Funding institutions: Federal Ministry of Education and Research/Life Science Incubator Bonn (BMBF/LSI Bonn)

SNAREopathies - Mechanismen neuropsychiatrischer, genetischer Erkrankungen des SNARE-Komplexes: Hin zu therapeutischen Maßnahmen
TP Tübingen: Funktionelle Analyse anhand von transgenen Mausmodellen, die Träger des krankheitsverursachenden Gens sind
Project leader: Prof. Dr. Holger Lerche
Funding institution: Federal Ministry of Education and Research (BMBF)

Doktorandenstipendium – Projekt: computer-basierte Modellrechnungen zur Änderung des Verhaltens von Nervenzellen bei genetischen Epilepsien
Project leader: Prof. Dr. Holger Lerche
Funding institution: Stiftung no epilep

UNAP-Projekt bei Nervenverletzung
Project leader: Prof. Dr. Alexander Grimm, Dr. Nathalie Winter
Funding institution: Deutsche Gesellschaft für Ultraschall in der Medizin (DEGUM)

TreatION - New therapies for neurologic ion channel and transporter disorders
Speaker: Prof. Dr. Holger Lerche
Funding institution: Federal Ministry of Education and Research (BMBF)

TP1: Coordination, Mol.-Therap. Board, and existing rare disease initiatives
Project leader: Prof. Dr. Holger Lerche
(with Dr. Holm Graessner from the Centre of Rare Diseases, Tübingen)

TP2: Data integration and in silico precision medicine for neurological ion channel and transporter disorders
Project leader: Prof. Dr. Yvonne Weber
(with Dr. Sarah von Spiczak, University Medical Center Schleswig-Holstein, Campus Kiel and Roland Krause, Luxembourg Centre for Systems Biomedicine, University of Luxembourg)

TP7: Multimodal analysis of novel mouse models associated with glutamate transporter dysfunction
Project leader: Dr. Ulrike Hedrich
(with Prof. Dr. Nikolaus Plesnila, LMU Munich)

TP8: Pathophysiology and therapy in human neuronal models of KCNA2 channelopathies
Project leaders: Prof. Dr. Holger Lerche, Dr. Henner Koch, Dr. Niklas Schwarz

Single-cell transcriptome sequencing to investigate mechanisms of epileptogenesis in genetic mouse models and human brain biopsy tissue
Project leader: Dr. Ulrike Hedrich, Dr. Henner Koch
(with Prof. Dr. Albert Becker, University of Bonn and Prof. Dr. Dirk Isbrandt, University of Cologne)
Funding institution: German Research Foundation (DFG)

Establishment of a human electrophysiological model to quantify the CGRP-related axon reflex of trigeminal afferents and its evaluation as a clinical tool to assess and predict treatment effects of migraine prophylaxis
Project leader: Dr. Victoria Ruschil
Funding institution: Medical Faculty, University of Tübingen

Genetics and pharmakogenetics of epilepsies
Project leader: Dr. Stefan Wolking
Funding institution: University of Tübingen
(Clinician Scientist)

Role of common and rare genetic factors In the etiology of genetic epilepsies and pharmacoresponse
Project leader: Dr. Stefan Wolking
Funding institution: German Research Foundation (DFG)

Investigation of novel treatment strategies for idiopathic epilepsy: from genetic modulation of neuronal network activity in vivo to transplantation of MGE-derived interneurons
Project leader: Dr. Thomas Wuttke
Funding institution: Medical Faculty, University of Tübingen

Somatotopia and fascikelarchitektur im gesunden und neuropathischen Nerv
Project leader: Dr. Natalie Winter
Funding Institution: University of Tübingen
(Clinician Scientist Program)

NEW GRANTS

Understanding the network consequences of interneuron loss – versus gain-of-function as a distinct disease correlates by using high resolution electrical imaging
Project leaders: Dr. Ulrike Hedrich, Dr. Thomas Wuttke, Dr. Niklas Schwarz, Dr. Günther Zeck (NMI Reutlingen)
Funding Institution: Hertie Foundation

Functional in vivo restoration of genetically determined epileptic neocortical circuitry
Project leader: Dr. Thomas Wuttke
Funding Institution: German Research Foundation (DFG)

PhD Theses

(Completed in 2020)

Harshad Pannikkaveettil Ashraf
Pathophysiology of *KCNA2*-mediated epileptic encephalopathies and the effect of *SCN1A* variants on thalamocortical up-states
Supervisors: Prof. Dr. Holger Lerche, Dr. Ulrike Hedrich

MD Theses

(Completed in 2020)

Stephanie Siona Pfeffer
Funktionelle Analyse von vier GABRA1-Mutationen bei schweren Epilepsieformen und idiopathischer generalisierter Epilepsie
Supervisor: Prof. Dr. Holger Lerche

Master Theses

(Completed in 2020)

Emilio Pardo-Gonzalez
Functional characterization of de novo KCND3 variants in neurodevelopmental disorders
Supervisors: Dr. Ulrike Hedrich, Mahmoud Koko

Zeynep Yentuer
Characterization of different potassium currents during action potential of induced pluripotent stem cell derived excitatory neurons
Supervisors: Dr. Ulrike Hedrich, Betül Uysal

Guest Researchers

Andrea Santuy
Universidad Autónoma Madrid, Spain
(funded by the Alexander von Humboldt Foundation)
Host: Prof. Dr. Holger Lerche

Department of Neuro-degenerative Diseases

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Prof. Dr. Thomas Gasser

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Prof. Dr. Ludger Schöls

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PD Dr. Rebecca Schüle
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David Skrabak
Linus Wiora

TRAINEES

Daniela Renftle

BUNDESFREIWILLIGENDIENST

Lea Hetzinger (until 08/2020)
Sascha Köhler (until 08/2020)
Annika Weger (until 08/2020)

Clinical Studies

PPMI – The Parkinson's Progression Markers Initiative
(please see: http://www.ppmi-info.org/)
Multicenter longitudinal observational study in PD
Investigators: PD Dr. Kathrin Brockmann

P-PPMI (please see also: Fox-Trial-Finder):
Prodromal Parkinson's Progression Markers Initiative: Multicenter longitudinal observational study in individuals at risk for PD
Investigators: PD Dr. Kathrin Brockmann

PPMI Genetic Cohort: Multicenter longitudinal observational study in genetic PD
Investigators: PD Dr. Kathrin Brockmann

Roche Pasadena Studie BP39529: a randomized, double-blind, placebo-controlled, 52-week phase II study to evaluate the efficacy of intravenous RO7046015 (PRX002) in participants with early Parkinson's Disease with a 52-week blinded extension Pasadena
Investigators: PD Dr. Kathrin Brockmann, Prof. Dr. Inga Liepelt-Scarfone, Prof. Dr. Thomas Gasser

Influence of Inflammatory Profiles on PD Phenotype and Progression
Investigator: PD Dr. Kathrin Brockmann

Kognitive Stimulation bei Patienten mit Parkinson-Demenz: Wirksamkeit, Prädiktoren des Trainingserfolgs und gesundheitsökonomische Evaluation
Investigator: Prof. Dr. Inga Liepelt-Scarfone

Cognitive-driven ADL impairment as a predictor for Parkinson's disease Dementia (PDD)
Investigator: Prof. Dr. Inga Liepelt-Scarfone

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

TREND-Studie (Tübinger evaluation of Risk factors for Early detection of NeuroDegeneration): Monocenter longitudinal observational study on individuals at high risk for PD to determine the value of risk, prodromal and progression markers in the prodromal phase. Please see also: http://www.trend-studie.de/english/
Investigators: Prof. Dr. Daniela Berg, Prof. Dr. Walter Mätzler (UKSH, Campus Kiel, Neurology), PD Dr. Kathrin Brockmann, (UKT, Neurology), Prof. Dr. Andreas Fallgatter, Prof. Dr. Gerhard Eschweiler, Prof. Dr. Florian Metzger (UKT, Psychiatry)

IMed-Study: a DZNE-funded project to understand the relation of Parkinson's disease and metabolic profiles including diabetes.
Investigators: PD Dr. Kathrin Brockmann, Prof. Dr. Thomas Gasser

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

DESCRIBE PD: multicenter study of the DZNE to detect biomarkers and protective factors associated with clinical trajectories and molecular pathways in PD.
Investigators: PD Dr. Kathrin Brockmann,
Prof. Dr. Thomas Gasser

DIFUTURE LOC- Early: DIFUTURE Longitudinale Kohortenstudie zur Beurteilung der Progression der Parkinson Erkrankung im frühen Krankheitsstadium (LOC-EARLY)
Investigators: PD Dr. Kathrin Brockmann,
Prof. Dr. Inga Liepelt-Scarfone, Prof. Dr. Thomas Gasser

DIFuture LOC-DBS: : DIFUTURE Longitudinale Kohortenstudie zur Beurteilung des Therapieerfolges im späten Krankheitsstadium der Parkinson Erkrankung (LOC-DBS)
Investigators: Prof. Dr. Daniel Weiß,
Prof. Dr. Inga Liepelt-Scarfone, Prof. Dr. Thomas Gasser

PDdementia: A BMBF-funded study to assess Biomarkers for dementia in PD using Cell Models and human CSF
Investigators: PD Dr. Kathrin Brockmann,
Prof. Dr. Thomas Gasser

ETAM: Validierungsstudie des Erlangen Test of Activities of Daily Living in Persons with Mild Dementia or Mild Cognitive Impairment (ETAM) bei Parkinson Patienten mit leichten kognitiven Einschränkungen
Investigators: Prof. Dr. Inga Liepelt-Scarfone, Patricia Sulzer

Klinische Charakterisierung der Parkinson Demenz: detaillierte Beschreibung und Identifikation von PDD Subgruppen aufgrund des kognitiven, genetischen, motorischen und nicht-motorischen klinischen Profils und deren Progression der Erkrankung über einen Verlauf von zwei Jahren
Investigators: Prof. Dr. Inga Liepelt-Scarfone, Sara Becker, Patricia Sulzer

ACT14820-MOVES-PD: Multizentrische, randomisierte, doppelblinde, placebokontrollierte Studie zur Beurteilung der Wirksamkeit, Sicherheit, Pharmakokinetik und Pharmakodynamik von GZ/SAR402671 bei Patienten mit Morbus Parkinson im Frühstadium, die eine GBA-Mutation oder eine vorspezifizierte Variante tragen
Investigators: Dr. Kathrin Brockmann,
Prof. Dr. Inga Liepelt-Scarfone, Prof. Dr. Thomas Gasser

EarlyStim – 10 year 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. Daniel Weiß

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

Subthalamic steering for therapy optimization in Parkinson's disease (SANTOP)
Investigator: Prof. Dr. Daniel Weiß,
Prof. Dr. Alireza Gharabaahi

Lateral steering of nigral stimulation for freezing of gait in Parkinson's disease (NIGRASTEER)
Investigator: Prof. Dr. Daniel Weiß,
Prof. Dr. Alireza Gharabaahi

Clinical Studies

Restitution of oral transport, deglutition, and aspiration with nigral stimulation in Parkinson's disease?
Investigator: Prof. Dr. Daniel Weiß

Combined stimulation of STN and SNr for Resistant Freezing of Gait in Parkinson's disease
Investigators: Prof. Dr. Daniel Weiß, Prof. Dr. Alireza Gharabaghi, Prof. Dr. Rejko Krüger, Dr. Georgios Naros

Sensing of oscillatory subthalamic nucleus field potentials for freezing of gait in Parkinson's disease (SenseFOG)
Investigators: Prof. Dr. Daniel Weiß, Prof. Dr. Alireza Gharabaghi

The efficacy of the combination of opicapone (+levodopa) + DBS on freezing of gait in Parkinson's disease (OpiDBS)
Investigator: Prof. Dr. Daniel Weiß

StimTox-CD: Eine randomisierte Vergleichsstudie von Tiefer Hirnstimulation des Globus pallidus internus versus Botulinumtoxingabe bei cervikaler Dystonie
Inivestigators: Prof. Dr. Daniel Weiß, Prof. Dr. Gharabaghi, Dr. Ebba Lohmann

Aspen – OLS: A Phase 3, Open-Label, Multi-Center Trial to Evaluate the Long-Term Safety and Efficacy of Repeat Treatments of Daxibotulinumtoxin A for Injection in Adults with Isolated Cervical Dystonia
Investigators: Dr. Ebba Lohmann

Natural history of Hereditary Spastic Paraplegia Type SPG4 (HSP registry)
Investigators: PD Dr. Rebecca Schüle, Dr. Christoph Kessler, Melanie Wayand, Prof. Dr. Ludger Schöls

Phenotype, Genotype and Biomarkers in ALS and Related Disorders (Clinical Research in ALS and Related Disorders for Therapeutic Development Consortium / CReATe)
Investigators: PD Dr. Rebecca Schüle, Prof. Dr. Inga Liepelt-Scarfone, Prof. Dr. Matthis Synofzik, Dr. Christoph Kessler, Dr. Carlo Wilke

Phenotypes, Biomarkers and Pathophysiology in Hereditary Spastic Paraplegias and Related Disorders (HSP-PBP)
Investigators: PD Dr. Rebecca Schüle, Dr. Christoph Kessler, Melanie Wayand, Prof. Dr. Ludger Schöls

GaitLab – Mobile Bewegungsanalyse unter supervidierten und nicht-supervidierten Bedingungen im häuslichen Umfeld bei *Patienten mit Bewegungsstörungen*
Investigators: PD Dr. Rebecca Schüle, Dr. Christoph Kessler, Melanie Wayand

Patient-centered outcome parameters in HSP: development and validation of patient- and caregiver reported outcomes (HSP-PCOM)
Investigators: PD Dr. Rebecca Schüle, Dr. Christoph Kessler, Melanie Wayand

Neuropsychological deficits in genetically defined subtypes of Hereditary Spastic Paraplegia (HSP)
Investigators: PD Dr. Rebecca Schüle, Prof. Dr. Inga Liepelt-Scarfone

Biomarkers of axonal degeneration in Hereditary Spastic Paraplegia and related diseases
Investigators: PD Dr. Rebecca Schüle, Dr. Christoph Kessler

PROSPAX: an integrated multimodal progression chart in spastic ataxias
Investigators: Prof. Dr. Matthis Synofzik, PD Dr. Rebecca Schüle, Dr. Dr. Andreas Traschütz, Dr. Christoph Kessler

European Friedreich's Ataxia Consortium for Translational Studies (EFACTS)
Investigators: Prof. Dr. Ludger Schöls, Dr. Zofia Fleszar, Dr. Stefanie Hayer, Prof. Dr. Jörg B. Schulz (Aachen)

ESMI: European Spinocerebellar Ataxia Type 3 / Machado-Joseph Disease Initiative
Investigators: Prof. Dr. Ludger Schöls, Dr. Holger Hengel, Prof. Dr. Matthis Synofzik, Dr. Winfried Ilg

Sporadic ataxia with adult onset: Natural history study (SPORTAX)
Investigators: Prof. Dr. Ludger Schöls, Prof. Dr. Matthis Synofzik, Prof. Dr. Thomas Klockgether (Bonn)

Autosomal-recessive and Early onset ataxia: Genetic basis and natural history (ARCA/EOA)
Investigators: Prof. Dr. Matthis Synofzik, Prof. Dr. Ludger Schöls

Solving the unsolved Rare Diseases (Solve RD)
Investigators: PD Dr. Rebecca Schüle, Prof. Dr. Matthis Synofzik, Prof. Dr. Ludger Schöls

Third-Party Funding

ONGOING GRANTS

PPMI – The Parkinson's Progression Markers Initiative
Project leaders: PD Dr. Kathrin Brockmann
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

PPMI – Amendment: Genetic PPMI
Project leaders: PD Dr. Kathrin Brockmann
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

PPMI Amendment – Cognitive categorization assessment
Project leader: PD Dr. Kathrin Brockmann
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Inclusion of Resting State MRI: A Parkinson's Progression Markers Initiative (PPMI) Substudy
Project leader: PD Dr. Kathrin Brockmann
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

P-PPMI – Prodromal subjects
Project leader: PD Dr. Kathrin Brockmann
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Observational study in non-demented patients with Parkinson's disease with lowered A-beta1-42 CFS levels
Project leaders: Prof. Dr. Inga Liepelt-Scarfone, Prof. Dr. Daniela Berg, Prof. Dr. Walter Maetzler
Funding institution: Janssen Pharmaceutica NV

PPMI – Amendment 11
Project leader: PD Dr. Kathrin Brockmann
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Cognitive stimulation therapy in patients with Parkinson's disease dementia: Efficacy, predictors of positive treatment outcomes and economical aspects
Project leader: Prof. Dr. Inga Liepelt-Scarfone
Funding institution: University of Cologne

ACT14820-MOVES-PD: Multizentrische, randomisierte, doppelblinde, placebokontrollierte Studie zur Beurteilung der Wirksamkeit, Sicherheit, Pharmakokinetik und Pharmakodynamik von GZ/SAR402671 bei Patienten mit Morbus Parkinson im Frühstadium, die eine GBA-Mutation oder eine vorspezifizierte Variante tragen
Project leaders: Prof. Dr. Thomas Gasser, PD Dr. Kathrin Brockmann, Prof. Dr. Inga Liepelt-Scarfone
Funding institution: Sanofi-Aventis Deutschland GmbH

Influence of Inflammatory Profiles on PD Phenotype and Progression
Project leader: PD Dr. Kathrin Brockmann
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Cognitive-driven ADL impairment as a predictor for Parkinson's disease Dementia (PDD)
Project leader: Prof. Dr. Inga Liepelt-Scarfone
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Roche Pasadena Studie BP39529: A randomized, double-blind, placebo-controlled, 52-week phase II study to evaluate the efficacy of intravenous RO7046015 (PRX002) in participants with early Parkinson's disease with a 52-week blinded extension Pasadena
Project leaders: PD Dr. Kathrin Brockmann, Prof. Dr. Inga Liepelt-Scarfone, Prof. Dr. Thomas Gasser
Funding institution: F. Hoffmann-La Roche AG

PPMI - Amendment 13
Project leader: PD Dr. Kathrin Brockmann
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

IMed 2019 - 2020: A Comprehensive Evaluation of Diagnostic and Prognostic Biomarkers in Diabetes Progression and Neurodegeneration
Project leaders: Prof. Dr. Thomas Gasser, PD Dr. Kathrin Brockmann
Funding institution: German Center for Neurodegenerative Diseases (DZNE)

PPMI - Amendment 14 - Digital Biomarker Data Collection
Project leader: PD Dr. Kathrin Brockmann
Funding Institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Third-Party Funding

ONGOING GRANTS

MJFF Global Genetic PD Cohort project
Project leader: PD Dr. Kathrin Brockmann
Funding institution: University Medical Center Schleswig-Holstein, Institute of Neurogenetics, Lübeck; MJFF

Multi-dimensional stratification of Parkinson's disease patients for personalized interventions (PD-Strat)
Project leader: Prof. Dr. Thomas Gasser
Funding institution: Federal Ministry of Education and Research (BMBF)

LRRK2 as a target for the treatment of Parkinson's disease
Project leader: Prof. Dr. Thomas Gasser
Funding institution: German Research Foundation (DFG)

Molekulare Stratifizierung neurodegenerativer Erkrankungen für Früherkennung und personalisierte Therapie
Projekt leader: Prof. Dr. Thomas Gasser
Funding institution: Baden-Württemberg Ministry of Science, Research and the Arts (MWK)

Data Integration for Future Medicine (DIFUTURE).
Project leader: Prof. Dr. Thomas Gasser
Funding institution: Federal Ministry of Education and Research (BMBF)

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)

Decipher the ComplexIty and Plasticity of Epigenomic Characteristics Under Influence of Environmental Factors in the Pathomechanistic Regulation of Parkinson's Disease (decipherPD): German-Canadian-French Joint Transnational Project „Epigenomics of Complex Diseases"
Project Leader: Prof. Dr. Philipp Kahle
Funding institution: Federal Ministry of Education and Research (BMBF)

Virtual Institute: RNA dysmetabolism in ALS and FTD
Project leader: Prof. Dr. Philipp Kahle
Funding institution: German Center for Neurodegenerative Diseases (DZNE)

DZNE Crosscutting Project: Posttranslational Modifications of TDP-43
Project leader: Prof. Dr. Philipp Kahle
Funding institution: NOMIS Foundation

GRK 2364: MOMbrane: The Multifaceted Functions and Dynamics of the Mitochondrial Outer Membrane
Project leaders: Dr. Julia Fitzgerald, Prof. Dr. Philipp Kahle
Funding institution: German Research Foundation (DFG) Research Training Group GRK 2364

Genomweiter RNAi Screen der Parkin abhängigen Eliminierung von depolarisierten Mitochondrien
Project leader: Dr. Sven Geisler
Funding institution: German Research Foundation (DFG)

Identification of modulators of the PINK1/Parkin-dependent mitophagy by siRNA based high-content screening of mitochondrial Parkin translocation
Project leader: Dr. Sven Geisler
Funding institution: ONO Pharmaceuticals

Sensing of oscillatory subthalamic nucleus field potentials for freezing of gait in Parkinson's disease (SenseFOG)
Investigators: Prof. Dr. Daniel Weiß, Prof. Dr. Alireza Gharabaghi
Funding institution: Medtronic

Combined interleaved stimulation of STN and SNr for mobility impairment related to freezing of gait:
A randomized controlled clinical trial
Project leaders: Prof. Dr. Daniel Weiß, Prof. Dr. Alireza Gharabaghi, Prof. Dr. Rejko Krüger, Dr. Georgios Naros
Funding institution: Medtronic

Subthalamic steering for therapy optimization in Parkinson's disease (SANTOP)
Investigator: Prof. Dr. Daniel Weiß
Funding institution: Abott

Lateral steering of nigral stimulation for freezing of gait in Parkinson's disease (NIGRASTEER)
Investigator: Prof. Dr. Daniel Weiß
Funding institution: Boston Scientific

Restitution of oral transport, deglutition, and aspiration with nigral stimulation in Parkinson's disease?
Investigator: Prof. Dr. Daniel Weiß
Funding institution: Michael J. Fox Foundation

ESMI: European Spinocerebellar Ataxia Type 3/ Machado-Joseph Disease Initiative
Project leader: Prof. Dr. Ludger Schöls
Funding institution: EU / BMBF

Translate NAMSE
Principle investigator: Prof. Dr. Ludger Schöls
Funding institution: Innovationsfond

Genetic basis of hereditary spastic paraplegias
Project leaders: Prof. Dr. Ludger Schöls, PD Dr. Rebecca Schüle
Funding institution: HSP Support Group; Germany e.V.

Pre-SPG4: Presymptomatic state of Hereditary Spastic Paraplegia Type 4
Project leaders: Dr. Tim Ratty, PD Dr. Rebecca Schüle, Prof. Dr. Ludger Schöls
Funding institution: HSP Support Group; Germany e.V.

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

Entwicklung und Evaluation eines modularen Physiotherapiekonzepts für Patienten mit Hereditärer Spastischer Spinalparalyse (HSP)
Project leaders: PD Dr. Rebecca Schüle, Prof. Ludger Schöls
Funding institution: Förderverein für HSP-Forschung e.V.

Natural history in Hereditary Spastic Paraplegia
Project leaders: PD Dr. Rebecca Schüle, Prof. Dr. Ludger Schöls
Funding institution: HSP Support Group; Germany e.V.

Clinical Research in ALS and Related Disorders for Therapeutic Development (CReATe) Consortium
Project leader: PD Dr. Rebecca Schüle
Funding institution: National Institutes of Health (NIH/NINDS)

Exome Studies in Hereditary Spastic Paraplegia – Beyond the Exome
Project leader: PD Dr. Rebecca Schüle
Funding institution: National Institutes of Health (NIH/NINDS)

TreatHSP: Translational Research in Hereditary Spastic Paraplegia
Project leader: PD Dr. Rebecca Schüle
Funding institution: Federal Ministry of Education and Research (BMBF)

Treat-HSP: WP4 iPSC-based neuronal models for biomarker discovery and therapeutic target identification in SPG4 and SPG31
Project leaders: Prof. Dr. Ludger Schöls, Dr. Stefan Hauser
Funding institution: Federal Ministry of Education and Research (BMBF)

NCER-PD – National Centre of Excellence in Research on Parkinson's Disease
Project leaders: Prof. Dr. Daniela Berg, Prof. Dr. Inga Liepelt-Scarfone
Funding institution: Fonds nationale de la Recherche Luxembourg / Université Luxembourg

From structure and function to allosteric targeting of LRRK2-mediated Parkinson's disease (Grant ID: 8068.02)
Project leader: PD Dr. Christian Johannes Gloeckner
Funding institution: The Michael J. Fox Foundation for Parkinson's Research (MJFF)

EU Horizon 2020 RIA Research and Innovation action: Solving the Unsolved Rare Diseases (Solve RD)
Co-Project leaders: Prof. Dr. Matthis Synofzik, PD Dr. Rebecca Schüle
Funding institution: EU

Non-motor features in Hereditary Spastic Paraplegia
Project leaders: Dr. Tim Ratty, PD Dr. Rebecca Schüle, Prof. Dr. Ludger Schöls
Funding institution: HSP Support Group; Germany e.V.

Translational Research in Hereditary Spastic Paraplegias: TreatHSP.net
Project leader: PD Dr. Rebecca Schüle
Funding institution: Federal Ministry of Education and Research (BMBF)

From Pathophysiology to Therapeutic Targets: Disturbed Sphingolipid Metabolism in HSP Caused by GBA2 Mutations
Project leader: PD Dr. Rebecca Schüle, Ulrike Ulmer
Funding institution: Tom Wahlig Foundation

Third-Party Funding

ONGOING GRANTS

Biomarkers of axonal degeneration in HSP
Project leader: PD Dr. Rebecca Schüle
Funding institution: National Institutes of Health (NIH/NINDS)

Biomarkers of axonal degeneration in HSP
Project leader: PD Dr. Rebecca Schüle
Funding institution: Australian Research Foundation

ZSE-DUO
Principle investigator: Prof. Dr. Ludger Schöls
Funding institution: Innovationsfond

Treat-ION: WP2 Investigating the pathophysiology and treatment options of ataxia-associated CACNA1A disease variants in Drosophila melanogaster
Project leader: Prof. Dr. Ludger Schöls
Funding institution: EU/BMBF

PROSPAX: an integrated multimodal progression chart in spastic ataxias (EJP consortium)
Project leaders: Prof. Dr. Matthis Synofzik, PD Dr. Rebecca Schüle
Funding: European Union EJP RD program/DFG

Blood Based Mitochondrial Biomarkers of Parkinson's Disease
Project leader: Dr. Julia Fitzgerald
Co-project leader: Dr. Gerrit Machetanz
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

NEW GRANTS

ERN-RND registry
Project leader: Prof. Dr. Ludger Schöls
Funding institution: European Union

LeukoExpert
Project leader: Prof. Dr. Ludger Schöls
Funding institution: Federal Ministry of Health (BMG)

Fellowship 2020
Project leader: Prof. Dr. Thomas Gasser
Funding institution: Deutsche Parkinson Vereinigung

MJFF - PPMI 2.0
Project leader: PD Dr. Kathrin Brockmann
Funding institution: Michael J. Fox Foundation for Parkinson's Research (MJFF)

Wissenschaftliche Zusammenarbeit innerhalb des Verbundprojekts „Prädiktive Diagnostik von immunassoziierten Erkrankungen für die personalisierte Medizin"
Project leader: PD Dr. Kathrin Brockmann
Funding institution: NMI - Naturwissenschaftliches und Medizinisches Institut an der Universität Tübingen

INTEGRative multi-OMICs approaches on iPSC-derived 2D and 3D models to elucidate the role of immune and energy metabolism related genes/ pathways in Amyotrophic Lateral Sclerosis
Project leaders: Dr. Dr. Michela Deleidi
Funding institution: EU ERA-Net 2018

GBA – PaCTS; GBA – personalised medicine for Parkinson disease: clinical and therapeutic stratification
Project leader: Dr. Dr. Michela Deleidi
Funding institution: JPND

Mapping the glucocerebrosidase interaction network to identify novel therapeutic targets for Parkinson's disease
Project leader: Dr. Dr. Michela Deleidi
Funding institution: Juniorprofessuren-Programm Baden-Württemberg Ministry of Science, Research and the Arts (MWK)

Interaction between ageing and immune dysfunction in LRRK2 Parkinson's disease
Project leader: Dr. Dr. Michela Deleidi
Funding institution: Network of Centres of Excellence in Neurodegeneration (COEN)

Biochemical and structural characterization of the LRRK2 activation cycle to develop allosteric LRRK2 inhibitors
(Grant ID: 8068.04)
Project leader: PD Dr. Christian Johannes Gloeckner
Funding institution: The Michael J. Fox Foundation for Parkinson's Research (MJFF)

PhD Theses
(Completed in 2020)

Sara Becker
Clinical and Structural Markers Associated with Cognitive Impairment in Non-Demented Parkinson's Disease Patients
Supervisor: Prof. Dr. Inga Liepelt-Scarfone

Stefanie Schuster
Deciphering the effect of mutant STUB1 on the heat shock response in SCAR16 patient-derived cells
Supervisor: Prof. Dr. Ludger Schöls

Katharina Stegen
Dysfunction of the Endosomal Na^+/H^+ Exchanger 6 (NHE6) in Cellular Models of Corticobasal Syndrome
Supervisor: Dr. Julia Fitzgerald

Patricia Sulzer
Quantitative Verfahren zur Erfassung von kognitiv assoziierten Alltagsbeeinträchtigungen bei Morbus Parkinson
Supervisor: Prof. Dr. Inga Liepelt-Scarfone

MD Theses
(Completed in 2020)

Steffen Dengler
Essentieller Tremor und Idiopathisches Parkinson-Syndrom: Unterschiede nicht-motorischer Symptome im Verlauf
Supervisor: Prof. Dr. Daniela Berg

Florian Funer
Veränderungen des Armschwungs während des Gehens als Prodromalmarker des idiopathischen Parkinson-Syndroms
Supervisor: Prof. Dr. Walter Mätzler

Sylvia Pflederer
Parkinson's disease patients with heterozygous GBA-mutation: longitudinal phenotyping of motor and non-motor symptoms – more rapid progression compared to Parkinson's disease patients without GBA-mutation
Supervisor: Prof. Dr. Daniela Berg

Stefanie Straub
Auswirkungen einer Depression im Laufe des Lebens auf die spätere Entwicklung von quantitativen Funktionsparametern
Supervisor: Prof. Dr. Walter Mätzler

Master Theses
(Completed in 2020)

Orchid Ammar
Studying the effects of PINK1 loss-of-function on cholesterol metabolism in human iPSC-derived models of Parkinson's Disease
Supervisor: Dr Julia Fitzgerald

Jacob Helm
ASO-mediated knockdown of ataxin-3 in iPSC-derived neurons
Supervisor: Prof. Dr. Ludger Schöls

Lara Sophie Rieder
Miro1 function in a human iPSC-derived model of Parkinson's Disease
Supervisor: Dr. Julia Fitzgerald

Maya Velardi
Neuere Ansätze in der Aphasietherapie
Supervisor: Prof. Dr. Ingo Hertrich

Linus Wiora
CRISPR/Cas-mediated knockout of SPAST and REEP1 in iPSC
Supervisor: Prof. Dr. Ludger Schöls

Bachelor Theses
(Completed in 2020)

Miriam Schmidt
Molecular and Technical Medicine, Furtwangen University
The Identification of Enzymes that Promote Pathological Acetylation of and Clearance of TDP-43 Acetylation-Related Aggregates
Supervisor: Prof. Dr. Philipp Kahle

Sophia Kieferle
Das kontextspezifische Proximity Interaktom der LRRK2 Downstream-Effektoren Rab8a und RILPL2
Supervisor: PD Dr. Christian Johannes Gloeckner

Awards

Dr. Julia Fitzgerald
Gender Equality Prize of The University of Tübingen
2019/2020

Department of Neurology and Interdisciplinary Neuro-Oncology

Clinical and Scientific Staff

HEAD OF THE DEPARTMENT

Prof. Dr. Dr. Ghazaleh Tabatabai

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PD Dr. Mirjam Renovanz
PD Dr. Johannes Rieger (part time)

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Dr. Sophie Hirsch
Dr. Daniel Merk
Dr. Hardy Richter
Dr. David Rieger

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Bianca Walter

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Hannes Becker
Elina Brendle
Elena Dangel
Juliane Ebert
Hulda Ewald
Ines Fachner
Jens Gieger
Mona Hirt
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Felix Lennartz

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Yeliz Donat
Sarah Hendel
Melina Hippler
Marion Jeric
Susanne Luginsland
Heike Pfrommer
Ute Walter
Kirsten Wyrwich

MASTER STUDENTS

Foteini Tsiami

Clinical Studies

NEUROONCOLOGY STUDIES RECRUITING TRIALS (OPEN FOR ENROLLMENT)

N2M2/NOA 20 (NCT-2014-0235)
Umbrella protocol for phase I/IIa trials of molecularly matched targeted therapies plus radiotherapy in patients with newly diagnosed glioblastoma without MGMT promoter methylation: NCT Neuro Master Match - N²M² (NOA-20)
Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai
Sponsor: University Hospital Heidelberg

Gloria -SNOXA12C401: Single-arm, Dose-Escalation, Phase 1/2 Study of Olaptesed Pegol (NOX-A12) in Combination with Irradiation in Inoperable or Partially Resected First-line Glioblastoma Patients with Unmethylated MGMT Promoter
Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai
Sponsor: NOXXON Pharma AG

ROSALIE: A Multicenter, Open-Label, First-in-Human, Phase Ib/IIa Trial of EO2401, a Novel multipeptide Therapeutic Vaccine, with and without PD-1 Check Point Inhibitor, Following Standard Treatment in Patients with Progressive Glioblastoma (Rosalie study)
Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai
Sponsor: Enterome

AmplifyNeovac/NOA-21 (NCT-2016-0458): Amplifying Neopitope-specific Vaccine Responses in progressive diffuse glioma – a randomized, open label, 3 arm multicenter Phase I trial to assess safety, tolerability and immunogenicity of IDH1R132Hspecific peptide vaccine in combination with checkpoint inhibitor Avelumab (AMPLIFY-NEOVAC, NOA-21
Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai
Sponsor: German Cancer Research Center

NOA 13: prospektive Beobachtungsstudie zur Chemotherapie bei nicht spezifisch vorbehandelten Patienten mit primärem ZNS-Lymphom (PZNSL)
Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai
Sponsor: Universitätsklinikum Bochum

Meningeosis Register: Multizentrische nicht-interventionelle Studie zur prospektiven Beobachtung und systematischer Behandlungsdokumentation bei Patienten mit leptomeningealer Ausbreitung eines Tumors
Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai
Sponsor: Universität Marburg

ZPM-001: Nicht-interventionelle Studie zur prospektiven systematischen Analyse der weiterführenden Molekular-diagnostik und zielgerichteter Therapiestrategien
Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai
Sponsor: University Hospital Tübingen

GLIOPT: Gliompatienten in der ambulanten Versorgung - Optimierung des psychosozialen Screenings bei ambulanten neuroonkologischen Patienten in einer prospektiven multizentrischen Studie
Investigator in Tübingen: Dr. Mirjam Renovanz

GLIOFIT: Machbarkeit einer Bewegungstherapie im Sinne der „prehabilitation" für Patienten mit Glioblastom und Auswirkungen auf Aktivität, Fatigue, Lebensqualität und Metabolismus
Investigator in Tübingen: Dr. Mirjam Renovanz

NOA 19: Retest-Reliabilität und lokalisationsabhängige Sensitivität neurokognitiver Testung bei erst-diagnostizierten Glioblastompatienten
Investigator in Tübingen: Dr. Mirjam Renovanz

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

NOA-10 (NCT01252459): Amino-acid PET versus MRI-guided re-irradiation in patients with recurrent Glioblastoma Multiforme (GLIAA)
Investigator in Tübingen: Prof. Dr. Daniel Zips
Sponsor: University Hospital Freiburg

Clinical Studies

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

AbbVie M13-813 (NCT02573324): A study of ABT-414 in subjects with newly diagnosed Glioblastoma (GBM) with Epidermal Growth Factor Receptor (EGFR) amplification (Intellance 1)
Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai
Sponsor: RTOG and AbbVie

NOA12: Phase I/II trial exploring the combination of the compound BIBF120 with re-irradiation versus re-irradiation alone in progressive glioblastoma.
Investigator in Tübingen: Prof. Dr. Daniel Zips
Sponsor: University Hospital Heidelberg

BMS-CA209-548 (NCT02667587): Study of Temozolomide Plus Radiation Therapy With Nivolumab or Placebo, for Newly Diagnosed Patients With Glioblastoma (GBM, a Malignant Brain Cancer) (CheckMate548)
Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai
Sponsor: BMS

BMS CA 209-498 (NCT02617589): Phase III trial of Nivolumab Compared to Temozolomide, Given With Radiation Therapy, for Newly-diagnosed Patients With Unmethylated Glioblastoma (GBM, a Malignant Brain Cancer) (CheckMate 498)
Investigator in Tübingen: Prof. Dr. Dr. Ghazaleh Tabatabai
Sponsor: BMS

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

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

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

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

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

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

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

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

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

Third-Party Funding

ONGOING GRANTS

Multipeptide vaccination with a new immunomodulatory agent XS15 in newly diagnosed glioblastoma: a first in man phase 1 trial
Project leaders: Prof. Dr. Dr. Ghazaleh Tabatabai, Prof. Dr. Hans-Georg Rammensee
Funding institution: Medical Faculty Tübingen

EKFS-Forschungskolleg „Therapieresistenz solider Tumore"
Project leader: Prof. Dr. Dr. Ghazaleh Tabatabai
Funding institution: Else Kröner Fresenius-Stiftung

Funktionelle Genomanalysen zur Charakterisierung von Resistenzmechanismen gegen Rezeptor-Tyrosinkinase-Inhibitoren im Glioblastom
Project leaders: Prof. Dr. Dr. Ghazaleh Tabatabai, Dr. Daniel Merk
Funding institution: Adolf-Leuze-Stiftung

Understanding acquired resistance and synthetic lethal interactions by funcitonal genomics for designing rational combinaiton therapies in glioblastoma
Project leader: Dr. Daniel Merk
Funding institution: Medical Faculty

Awards

Prof. Dr. Dr. Ghazaleh Tabatabai
Listing "Top physician 2020" (Brain Tumor Treatment)

MD Theses

(Completed in 2020)

Felix Lennartz
Zytoplasmatische Sequestrierung von bHLH-Transkriptions-faktoren in experimentellen Gliomen
Supervisor: Prof. Dr. Dr. Ghazaleh Tabatabai

Master Theses

(Completed in 2020)

Foteini Tsiami
Genome-wide CRISPR/Cas9 knockout screens decipher genetic vulnerabilities in Sonic hedgehog medulloblastoma
Supervisor: Prof. Dr. Dr. Ghazaleh Tabatabai

Department of Neural Dynamics and Magneto-encephalography

Clinical and Scientific Staff

HEAD OF THE DEPARTMENT

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Prof. Dr. Christoph Braun
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Dr. Qinglin Li
Dr. Justus Marquetand
Dr. Constantin von Nicolai
Dr. Nima Noury

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Adham Elshahabi
Chiara Fioravanti
Janet Giehl
Giulia Righetti
Florian Sandhäger
Jan Schlüsener
Marcus Siems
Davide Sometti
Vera Voigtländer

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Karola Schiele
Carolin Schnabel
Yvonne Qu

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Paul Hege
Jiatong Liu
Tobias Ludwig
Nina Omejc
Angela Radetz
Clara Rastelli
Giulia Righetti
Malav Shah
Davide Sometti

TECHNICAL STAFF/ ADMINISTRATION

Jürgen Dax
Timo Larbig
Gabriele Walker-Dietrich

Clinical Studies

Imaging cortico-cortical interactions in multiple sclerosis
Investigators: Marcus Siems, Dr. Johannes Tünnerhoff, Prof. Ulf Ziemann, Prof. Dr. Markus Siegel

Acting in space and time – two functions of the same neural circuits?
Investigators: Dr. Qinglin Li, Dr. David Hawellek, Prof. Dr. Markus Siegel

Network biomarkers of fractal and oscillatory cortical activity
Investigators: Andrea Ibarra Chaoul, Prof. Dr. Markus Siegel

Sequence motifs of rhythmic cortical activity
Investigators: Paul Hege, Prof. Dr. Markus Siegel

Cortico-subcortical interactions during flexible working memory
Investigators: Dr. Constantin von Nicolai, Prof. Dr. Markus Siegel

Non-invasive entrainment of cortical oscillations using transcranial alternating current stimulation (tACS)
Investigators: Dr. Nima Noury, Prof. Dr. Markus Siegel

Oscillatory waveforms as spectral biomarkers of neuronal circuit interactions
Investigators: Janet Giehl, Prof. Dr. Markus Siegel

Non-invasive decoding of abstract choices using magnetoencephalography (MEG)
Investigators: Florian Sandhäger, Prof. Dr. Markus Siegel

Large-scale interactions during natural vision
Investigators: Jan Schlüsener, Prof. Dr. Markus Siegel

Measuring cortical and peripheral neural signals with optically pumped magnetometers
Investigators: Dr. Philip Broser, Prof. Dr. Markus Siegel, Prof. Dr. Christoph Braun

Manipulation of the somatosensory coordinate system by vibratory stimulation of the neck
Investigators: Roberta Calce, Dr. Daniel Wiesen, Prof. Dr. Dr. Hans-Otto Karnath, Prof. Dr. Christoph Braun

Network analysis in generalized epilepsy
Investigators: Christina Stier, Adham Elshahabi, Dr. Yiwen Li Hegner, Prof. Dr. Christoph Braun, Prof. Dr. Niels Focke, Prof. Dr. Holger Lerche

Reading of German words and Chinese symbols in dyslexic and normal reading children
Investigators: Giulia Righetti, Prof. Dr. Christoph Braun, Prof. Dr. Susanne Trauzettel-Klosinski

Localizing spontaneous memory reprocessing during human sleep
Investigators: Lea Himmer, Zoé Bürger, Leonie Fresz, Janina Maschke, Lore Wagner, Dr. Svenja Brodt, Prof. Dr. Monika Schönauer, Prof. Dr. Christoph Braun, Prof. Dr. Steffen Gais

Biological motion and social cognition
Investigators: Sara Insernia, Dr. Alexander Sokolov, Prof. Dr. Christoph Braun, Prof. Dr. Marina Pavlova

Spatial hearing in cochlear impant users: a multisensory training approach
Investigators: Giulia Righetti, SangYeob Baek, Lorenzo Semeia, Eusebia Schäfer, Karola Schiele, Bianca Layer, Dr. Li Hegner, Prof. Dr. Christoph Braun

Neurophysiological assessment of the subcortical and cortical processiong in the auditory system
Investigators: Verónica Cuevas Villanueva, Carolin Schnabel, Dr. Yiwen Li Hegner, Prof. Dr. Christoph Braun

Clinical Studies

Effects of pro- and antibiotics on cortical network dynamics
Investigators: Davide Sometti, Prof. Dr. Christoph Braun, Prof. Dr. Paul Enck

Development of a therapeutic vest for the prophylaxis of falling by training proprioception
Investigators: Giuliano Giari, Dr. Eva Glink, Dr. Yiwen Li Hegner, Prof. Dr. Christoph Braun

A tactile virtual reality for the psychophysical and neuroimaging studies of active and passive touch
Investigators: Dr. Arindam Bhattacharjee, Dr. Diljit Singh Kajal, Prof. Dr. Cornelius Schwarz, Prof. Dr. Christoph Braun

Inhibition in the somatosensory system: a combined neuropharmacological and neuroimaging approach
Investigators: Chiara Fioravanti, Dr. Diljit Singh Kajal, Prof. Dr. Ulf Ziemann, Prof. Dr. Christoph Braun

Third-Party Funding

ONGOING GRANTS

ERC Consolidator grant:
Neuronal information through neuronal interactions
Project leader: Prof. Dr. Markus Siegel
Funding institution: European Research Council (ERC)

SFB 1233 – project 7:
Large-scale neuronal interactions during natural vision
(DFG SFB 1233 , Robust Vision', TP 7)
Project leader: Prof. Dr. Markus Siegel
Funding institution: German Research Foundation (DFG)

Development of a therapeutic vest for the prophylaxis of falling by training proprioception
Project leaders: Prof. Dr. Markus Siegel, Prof. Dr. Christoph Braun
Funding institution: German Ministry for Economics (BMBF)

Psychophysics and coding of vibrotactile signals in the human fingertip-related tactile system
Project leaders: Prof. Dr. Cornelius Schwarz, Prof. Dr. Christoph Braun
Funding institution: German Research Foundation (DFG)

NEW GRANTS

Next generation connectomics: laminar and spectral specificity
Project leaders: Prof. Dr. Markus Siegel, Prof. Dr. Klaus Scheffler, Dr. Gabriele Lohmann
Funding institution: German Research Foundation (DFG) within SPP 2041 (Computational Connectomics)

SFB 1233 – project 7: Large-scale neuronal interactions during natural vision
(DFG SFB 1233 , Robust Vision', TP 7; second funding period)
Project leaders: Prof. Dr. Markus Siegel, Prof. Dr. Andreas Bartels
Funding institution: German Research Foundation (DFG)

PhD Theses
(Completed in 2020)

Chiara Fioravanti
Mechanisms of inhibition in the somatosensory system and perceptual threshold calculation
Supervisor: Prof. Dr. Christoph Braun

MD Theses
(Completed in 2020)

Eusebia Schäfer
Entwicklung eines neuen Paradigmas zur Evaluation des Raumrichtungshörens bei Normalhörenden und Patientinnen und Patienten mit Cochleaimplantat – eine hochauflösende EEG-Studie
Supervisor: Prof. Dr. Christoph Braun

Master Theses
(Completed in 2020)

Vera Voigltänder
Neuronal basis of human speech
Supervisor: Prof. Dr. Markus Siegel

Malav Shah
Decoding high-level image statistics with MEG
Supervisor: Prof. Dr. Markus Siegel

Department of Cognitive Neurology

Clinical and Scientific Staff

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

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Dr. Peter Dicke
Dr. Winfried Ilg
Dr. Fatemeh Khademi
PD Dr. Axel Lindner
Dr. Tamara Matuz
Dr. Albert Mukovskiy
Dr. Christine Pedroarena
Dr. Jörn Pomper (until 09/2020)
Dipl.-Psych. Maria Rähder
Dr. Vishnudev Ramachandra
Dr. Hamidreza Ramezanpour (until 09/2020)
Dr. Johannes Rennig (until 02/2020)
Dr. Dr. Silvia Spadacenta
Dr. Christoph Sperber

PHD DOCTORAL STUDENTS

Matthias Philipp Baumann
Ian Chong
Ritu Roy Chowdhury
Amin Dadashi
Martina Feierabend
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Kalpana Gupta
Saad Idrees
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Fabio Izzi
Jana Lang
Alexander Lappe
Tatiana Malevich
Akshay Markanday
Lucas M. Martini
Francesko Molla
Sophia Nestmann
Christian Nithammer
Lilei Peng
Vishnudev Ramachandra
Aikaterini Eleonora Rassia
Lisa Röhrig
Hannah Rosenzopf
Alessandro Salatiello
Jens Seemann
Masih Shafiei
Mohammad Shams Ahmar
Azam Shahvaroughi Farahani
Ramona Siebert
May-Li Silva Prieto
Stefan Smaczny
Oleg Spivak (until 05/2020)
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Michael Stettler
Katrin Stollenmaier
Nick Taubert
Annika Thierfelder
Shengjun Wen
Daniel Wiesen
Tong Zhang

MEDICAL DOCTORAL STUDENTS

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Natalie John
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Kristina Kaufhold
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Leonie Isabelle Reinermann
Dominik David Wabersich
Yuechen Zhang

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Ute Großhennig (until 09/2020)
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Ursula Pascht

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Moritz Engelhardt
Mariya Kaisheva
Jana Lang
Christian Langenberger
Jithin Nambiar
Daniela Piechnik
Goutham Praneetha Anand
Nathalie Renz
Yosifa Talker
Annika Thierfelder

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Pauline Reichert
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Vanessa Kasties
Sarah Riepe
Ilka Stefanie Rist
Annabel Schütte
Lea Schumacher
Yosifa Talker
Lena Willner

BUNDESFREIWILLIGENDIENST

Moritz Bobleter (until 07/20)
Franziska Franke (since 09/20)
Jared Mayer (since 09/20)

Clinical Studies

PreAtaxia: Changes in the control of posture and gait in pre-symptomatic and pre-clinical stages of degenerative cerebellar ataxia
Investigators: Dr. Winfried Ilg, Zofia Fleszar, Cornelia Schatton, Prof. Dr. Martin Giese, Prof. Dr. Ludger Schöls, Prof. Dr. Matthis Synofzik

Motor training in pre-clinical stages of degenerative cerebellar ataxia
Investigators: Dr. Winfried Ilg, Cornelia Schatton, Prof. Dr. Martin Giese, Prof. Dr. Ludger Schöls, Prof. Dr. Matthis Synofzik

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

Cerebellar ataxia as a loss of precise velocity duration trade-off
Investigators: Julian Meßner, Akshay Markanday, Prof. Dr. Peter Thier

'Gaze Following' bei Autismus-Spektrumstörung
Investigators: Manuel Roth, PD Dr. Axel Lindner, Prof. Dr. Peter Thier

Neuronale Grundlagen der Integration geometrischer und kontextabhängiger Information zur Ausrichtung sozialer Aufmerksamkeit
Investigators: Dr. Peter Dicke, Prof. Dr. Peter Thier

Pattern recognition in neuro-vestibular diagnostics, a retrospective analysis
Investigators: Dr. Jörn Pomper, Dr. Friedemann Bunjes, Prof. Dr. Peter Thier

Clinical patterns in patients with dizziness: how much can we gain from subjective reports by questionnaires
Investigators: Dr. Jörn Pomper, Vincent Müller, Dr. Friedemann Bunjes, Prof. Dr. Peter Thier

Demarcation of subjective value from arousal during action observation in F5 mirror neurons
Investigators: Dr. Jörn Pomper, Dr. Dr. Silvia Spadacenta, Dr. Friedemann Bunjes, Prof. Dr. Martin Giese, Prof. Dr. Peter Thier

Comparison of action specificity during action execution and observation in F5 mirror neurons
Investigators: Dr. Jörn Pomper, Shengjun Wen, Dr. Dr. Silvia Spadacenta, Dr. Friedemann Bunjes, Prof. Dr. Peter Thier

MRI substrates of specific neuropsychological dysfunctions within and across FTD genotypes at the presymptomatic and symptomatic disease stage
Investigators: PD Dr. Marc Himmelbach, Prof. Dr. Matthis Synofzik, Prof. Dr. Dr. Hans-Otto Karnath

Treating dystonia by brain stimulation
Investigators: Dr. Ebba Lohmann, PD Dr. Marc Himmelbach, Prof. Dr. Dr. Hans-Otto Karnath

Tremor, Blickbewegungen und neuropsychiatrische Evaluation bei Patienten mit zervikaler Dystonie
Investigators: Prof. Dr. Uwe Ilg, PD Dr. Marc Himmelbach, Dr. Ebba Lohmann

Manipulation of the somatosensory coordinate system by vibratory stimulation of the neck
Investigators: Roberta Calce, Dr. Daniel Wiesen, Prof. Dr. Dr. Hans-Otto Karnath, Prof. Dr. Christoph Braun

A new therapy approach for pusher syndrome
Investigators: Sophia Nestmann, Lisa Röhrig, Prof. Dr. Dr. Hans-Otto Karnath

New techniques to treat spatial exploration and attention disorders after stroke
Investigators: Prof. Dr. Dr. Hans-Otto Karnath, Katrin Flammer

Third-Party Funding

ONGOING GRANTS

Direct recordings of neuronal circuit responses during transcranial magnetic stimulation in rodents (BE 6084/2-1)
Project leader: Dr. Alia Benali
Funding institution: German Research Foundation (DFG)

Hierarchische Koordination komplexer Bewegungen (BMBF CRCNS)
Project leader: Prof. Dr. Martin A. Giese
Funding institution: Federal Ministry of Education and Research (BMBF)

Smarte Sensorik bei Telepsychotherapie von Kindern und Jugendlichen mit Zwangsstörungen (SSTeP-KiZ)
Project leader: Prof. T. Renner, Prof. Dr. Martin A. Giese
Funding institution: Federal Ministry of Health (BMG)

How body relevance drives brain organization (RELEVANCE)
Project leader: Prof. Dr. Martin A. Giese
Funding institution: European Research Council, Horizon 2020 (ERC, H2020)

Human Frontier Science Program Organization (HFSP-Project)
Project leader: Prof. Dr. Martin A. Giese
Funding institution: Human Frontier Science Program Organization (HFSPO)
Funding institution: Cyber Valley Research Fund Board (RFB)

System Mensch: vom digitalen Modell zur Anwendung
Project leader: Prof. Dr. Martin A. Giese
Funding institution: Ministry of Science, Research and the Arts Baden-Württemberg

Neural mechanisms underlying the visual analysis of intent (RGP0036/2016)
Project leader: Prof. Dr. Martin Giese
Funding institution: Human Frontiers Science Program (HFSP)

CIN Mini Research Training Project (EXC 3017, Mini_KG-2017-04)
Project leader: Prof. Dr. Martin Giese
Funding institution: German Research Foundation (DFG)

KONSENS-NHE – Entwicklung eines kontextsensitiven neural-gesteuerten Handexoskeletts zur Wiederherstellung der Alltagsfähigkeit nach Hirn- und Rückenmarks-verletzungen
Project leaders: Prof. Dr. Martin Giese, Prof. Dr. Surjo Soekadar, Dr. Martin Spüler
Funding institution: Baden-Württemberg Foundation

Einstellbare muskuläre Dämpfung zur Erhöhung von morphological computation bei der Fortbewegung mit Beinen (DFG HA 7170/3-1)
Project leader: Dr. Daniel Häufle
Funding institution: German Research Foundation (DFG)

Learning efficient control of non-linear muscle-driven systems: Morphological computation as guiding principle (CyVy-RF-2020-11)
Project leader: Dr. Daniel Häufle
Funding institution: Cyber Valley Research Fund

The contribution of bioinspired morphology to the control of technical movement: Quantification with Control Effort and Morphological Computation
Project leader: Dr. Daniel Häufle
Funding institution: International Max-Planck Research School for Intelligent Systems & University of Tübingen

Evolutionary Optimisation of Neuronal Processing): Saccadic suppression: from zebrafish to primates (SPP 2205)
Project leader: Prof. Dr. Ziad Hafed, Jun. Prof. Aristides Arrenberg
Funding institution: German Research Foundation (DFG)

Visual functions of the primate superior colliculus (BO5681/1-1)
Project leader: Prof. Dr. Ziad Hafed, Dr. Amarender R. Bogadhi
Funding institution: German Research Foundation (DFG)

The Physiology of Distributed Computing Underlying Higher Brain Functions in Non-Human Primates – Project A6: Brainstem control of slow ocular drifts during gaze fixation (FOR1847)
Project leader: Prof. Dr. Ziad Hafed
Funding institution: German Research Foundation (DFG)

CIN Mini Research Training Project (EXC 307, Mini_KG-2017-04)
Project leader: Prof. Dr. Ziad Hafed
Funding institution: German Research Foundation (DFG)

Third-Party Funding

ONGOING GRANTS

Effects of saccade-like image shifts on retinal processing: phenomena, mechanisms, and relation to visual processing in higher brain centers (MU3792/3-1)
Project leader: Prof. Dr. Ziad Hafed, Dr. Thomas Münch
Funding institution: German Research Foundation (DFG)

SFB 1233 – Project 11: Stable vision in the presence of fixational eye movements: where and how is the retinal image jitter compensated?
Project leaders: Prof. Dr. Frank Schaeffel, Prof. Dr. Ziad Hafed
Funding institution: German Research Foundation (DFG)

NIH-BMBF CRCNS Grant: Computational neuroimaging of the human brainstem at 9.4T
Project leader: PD Dr. Marc Himmelbach
Funding institution: Federal Ministry of Education and Research (BMBF)

Pupils Lab for Neuroscience (P1150100)
Project leader: Prof. Dr. Uwe Ilg
Funding institution: Hertie Foundation

Videogame-based coordinative training in children with degenerative ataxia
Project leaders: Dr. Winfried Ilg, Prof. Dr. Matthis Synofzik
Funding institution: Oliver-Vaihinger-Fond, Stiftung für kranke Kinder

Unresolved issues in unilateral neglect: An update (Nr. 11601161)
Project leaders: Prof. Dr. Dr. Hans-Otto Karnath, Daniel Wiesen
Funding institution: Luxembourg National Research Fund

Individuelle Erholung von kognitiven Defiziten nach Schlaganfall (KA 1258/23-1)
Project leader: Prof. Dr. Dr. Hans-Otto Karnath
Funding institution: German Research Foundation (DFG)

Facts and Figures: Neurofunktionelle Strukturen und kognitive Prozesse numerischer Größenverarbeitung und arithmetischen Faktenabrufs (KA 1258/24-1)
Project leader: Prof. Dr. Dr. Hans-Otto Karnath
Funding institution: German Research Foundation (DFG)

Benefits of a game-based cognitive interface for knowledge work – from basic effects and neural correlates to neuropsychological rehabilitation
Project leaders: Prof. Dr. Manuel Ninaus, Prof. Dr. Dr. Hans-Otto Karnath
Funding institution: Leibniz-Institut für Wissensmedien

Psychophysik und Kodierung des vibrotaktilen Signals im taktilen System von Ratte und Mensch (SCHW 577/14-1)
Project leader: Prof. Dr. Cornelius Schwarz
Funding institution: German Research Foundation (DFG)

Functional modules in primary motor cortex (SCHW577/16-1)
Project leader: Prof. Dr. Cornelius Schwarz
Funding institution: German Research Foundation (DFG)

CIN Mini Research Training Project (EXC 307, Mini_KG-2017-04)
Project leader: Prof. Dr. Cornelius Schwarz
Funding institution: German Research Foundation (DFG)

Process models of associative learning and related plasticity in primary sensory cortex (DFG SCHW 577/17-1)
Project leader: Prof. Dr. Cornelius Schwarz
Funding institution: German Research Foundation (DFG)

Research Unit FOR 1847 "Primate Systems Neuroscience" – Project A3: The role of the cerebellum in the control of saccades as a window into neural mechanisms of movement optimization (TH 425/13-2)
Project leader: Prof. Dr. Peter Thier
Funding institution: German Research Foundation (DFG)

Research Unit FOR 1847 "Primate Systems Neuroscience" – Central Office Project (TH 425/14-2)
Project leader: Prof. Dr. Peter Thier
Funding institution: German Research Foundation (DFG)

Towards the neural basis of joint attention II (TH 425/12-2)
Project leader: Prof. Dr. Peter Thier
Funding institution: German Research Foundation (DFG)

Erfüllung der Aufgaben der Abt. Kognitive Neurologie (T0013/29010/2016/kg)
Project leader: Prof. Dr. Peter Thier
Funding institution: Hermann and Lilly Schilling Foundation

NEW GRANTS

Innovative App zur therapeutischen Behandlung des visuellen Neglects
Project leaders: Prof. Dr. Dr. Hans-Otto Karnath, Katrin Flammer
Funding institution: Hector Foundation II gGmbH, Weinheim

SFB 1233 (Robust Vision) – Project 11: Impacts of eye movements on visual processing: from retina to perception
Project leader: Prof. Dr. Ziad Hafed, Dr. Katrin Franke
Funding institution: German Research Foundation (DFG)

Development of a minimally-invasive magnetic system for high-quality wireless eye movement tracking in non-human primates (HA6749/4-1)
Project leader: Prof. Dr. Ziad Hafed
Funding institution: German Research Foundation (DFG)

Local tactile coding in the human fingertip
(DFG SCHW 577/14-3)
Project leader: Prof. Dr. Cornelius Schwarz
Funding institution: German Research Foundation (DFG)

Awards

Dr. Albert Mukovskiy
Südwestmetall Förderpreis 2020
(Outstanding Junior Researchers)

Idrees et al., Nature Communications, 2020
"EXCEPTIONAL" Rating by Faculty Opinions

Idrees et al., Nature Communications, 2020
Ranked Among the Top 10 Publications of 2020 by the European Vision Research Institute

Conferences & Workshops

30th Ocular Motor Meeting "München, Tübingen, Zürich" MüTüZü
Tübingen, 14 - 15 February 2020
Scientific coordinators: Prof. Dr. Ziad Hafed, Prof. Dr. Uwe Ilg, Dr. Joern Pomper

Monkey Methods Meeting – M3
Tübingen, 9 March 2020
Scientific coordinator: Prof. Dr. Peter Thier
Cancelled due to Covid-19 regulations on February 28

Primate Neurobiology Conference 2020
Tübingen, 10 - 11 March 2020
Scientific coordinator: Prof. Dr. Peter Thier
Cancelled due to Covid-19 regulations on February 28

PhD Theses

(Completed in 2020)

Mohammad Hovaidi Ardestani
Action in Mind: Models for Action and Intention Perception
Supervisor: Prof. Martin Giese

Saad Idrees
Saccadic suppression by way of retinal image processing
Supervisor: Prof. Dr. Ziad Hafed, Dr. Thomas Münch

Jens R. Müller
Role of electrical synapses in the rat inferior olive: Assessment during postnatal development and after knockdown of Connexin 36
Supervisor: Prof. Dr. Peter Thier

Oleg Spivak
Using microstimulation to identify the role of the FEF in the control of saccades
Supervisor: Prof. Dr. Peter Thier

MD Theses

(Completed in 2020)

Vincent Müller
Vestibulär, primär oder sekundär somatoform? Symptommuster chronischen Schwindels im Vergleich
Supervisors: Dr. Jörn Pomper, Prof. Dr. Peter Thier

Master Theses

(Completed in 2020)

Lena Kopnarski
Performance Evaluation of an Underactuated Prosthetic Hand in Daily Life Activities
Supervisor: Prof. Martin Giese

Jana Lang
Predicting Ball Catching Attempts in Healthy and Pathological Subjects with Recurrent Neural Networks
Supervisor: Dr. Winfried Ilg, Prof. Martin Giese

Christina Langenberger
Processing of natural visual scenes in posterior temporo-parietal brain areas
Supervisor: Prof. Dr. Dr. Hans-Otto Karnath

Jithin Nambiar
Role of functional modules of whisking in motor cortex in goal-directed behavior
Supervisor: Prof. Dr. Cornelius Schwarz

Daniela Piechnik
Longitudinal analysis of cortical thickness of genetic frontotemporal dementia patients in relation to fluid biomarkers
Supervisor: PD Dr. Marc Himmelbach

Annika Thierfelder
Methods for the quantification of turning movements using wearable sensors in cerebellar ataxia
Supervisor: Dr. Winfried Ilg, Prof. Martin Giese

Bachelor Theses

(Completed in 2020)

Lisa Arnoldt
Untersuchung von Gangauffälligkeiten bei Kindern und Jugendlichen mit Autismus-Spektrum-Störungen. Von der klinischen Beurteilung zur quantitativen Analyse freier Gehbewegungen
Supervisor: Dr. Winfried Ilg, Prof. Martin Giese

Lukas Gehre
Entwicklung eines Systems zur mobilen Ganganalyse mit auditivem online Feedback für neurologische Bewegungsstörungen.
Supervisor: Dr. Winfried Ilg

Lorenz Gewert
Interactions of local and global motion processing in dizziness diagnosis
Supervisor: Prof. Dr. Uwe Ilg

Stephanie Honorato Rodrigues
Parameter der Initiierung von glatten Augenfolge-bewegungen bei gesunden Probanden
Supervisor: Prof. Dr. Uwe Ilg

Sarah Hornfeck
Central-peripheral advantage at the blind spot
Supervisor: Prof. Dr. Uwe Ilg

Lara Lutz
Der Einsatz digitaler Medien im Biologieunterricht: Entwurf einer Unterrichtsstunde
Supervisor: Prof. Dr. Uwe Ilg

Iris Mahninger
Analyse von Armbewegungen bei Patienten mit cerebellar Ataxie und Kindern mit Autismus auf der Basis tragbarer Bewegungssensoren
Supervisor: Dr. Winfried Ilg, Prof. Martin Giese

Jonas Mücke
Classification of everyday human activities based on deep neural networks
Supervisor: Dr. Winfried Ilg, Prof. Martin Giese

Pauline Reichert
Bewegungsanalyse bei Ataxiepateineten mit tragbaren Sensoren
Supervisor: Dr. Winfried Ilg

Laura Renz
Analyse komplexer Bewegungsabläufe bei Kindern und Jugendlichen mit einer Autismus-Spektrum-Störung
Supervisor: Dr. Winfried Ilg

Leelja Rößler
Analysis of nasal-temporal differences during initiation of smooth pursuit eye movements in horizontal direction
Supervisor: Prof. Dr. Uwe Ilg

Guest Researcher

Prerana Kumar
Master Project
Host: Prof. Martin Giese

Department of Cellular Neurology

Clinical and Scientific Staff

HEAD OF THE DEPARTMENT

Prof. Dr. Mathias Jucker

GROUP LEADERS

Dr. Jonas Neher
(Experimental Neuroimmunology group, jointly with the German Center for Neurodegenerative Diseases, DZNE)
Prof. Dr. Christoph Laske (Section of Dementia Research, jointly with the University Department of Psychiatry and Psychotherapy)

SCIENTISTS/RESIDENTS

Melanie Barth
Carina Bergmann
Natalie Beschorner
Desirée Brösamle
Lisa Häsler
Stephan Käser
Dr. Deborah Kronenberg-Versteeg
Ping Liu
Linda Oberle
Dr. Jörg Odenthal
Christine Rother
Dr. Alejandro Ruiz Riquelme
Dr. Angelos Skodras
Dr. Matthias Staufenbiel
Lisa Steinbrecher
Dr. Jian Sun
Dr. Gaye Tanriöver
Ruth Uhlmann (née Dröge, until 04/2020)
Jessica Wagner
Dr. Bettina Wegenast-Braun (until 09/2020)
Marc Welzer
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Elke Kuder-Buletta
Dr. Susanne Gräber-Sultan
Oliver Preische

MASTER STUDENTS

Lena Erlebach
Julia Koppelmann

Clinical Studies

DELCODE (DZNE – Longitudinal Cognitive Impairment and Dementia Study): The study focuses on the characterization of subjective cognitive decline (SCD) in patients recruited from memory clinics at the DZNE sites in Germany. In addition, individuals with amnestic mild cognitive impairment (MCI), mild Alzheimer's disease (AD), first-degree relatives of AD patients, and cognitively unimpaired control subjects are studied. The total number of subjects to be enrolled is 1000.
Investigators: Prof. Dr. Christoph Laske

APOLLOE4 Study: A phase 3, multicenter, randomized, double-blind, placebo-controlled study of the efficacy, safety and biomarker effects of ALZ-801 in subjects with early Alzheimer's disease and APOE4/4 genotype: ALZ-801, a novel prodrug of Tramiprosate, is a small molecule that inhibits the formation of soluble beta amyloid (Aß-42) oligomers. In a previous study, Tramiprosate showed promising clinical efficacy in APOE4 homozygotes and heterozygotes subgroups of Alzheimer`s disease (AD) patients. In the current multicenter study, approximately 300 subjects with clinical diagnosis of early AD, carrying the APOE4/4 genotype, will be included.
Investigator: Prof. Dr. Christoph Laske

TAUgether Study: A patient- and investigator-blind, placebo-controlled study to evaluate the efficacy, safety and tolerability of Bepranemab in study participants with prodromal to mild Alzheimer's disease (AD): Bepranemab is a monoclonal antibody that targets a central epitope of tau protein. In preclinical studies, Bepranemab bound and neutralized human pathological tau and blocked the cell-to-cell spread of tau seeds. In the current multicenter study, approximately 450 subjects with prodromal to mild AD will be included.
Investigator: Prof. Dr. Christoph Laske

Third-Party Funding

ONGOING GRANTS

Generation of APP transgenic mice
Project leader: Prof. Dr. Mathias Jucker
Funding institution: Koesler

Characterization of early proteopathic seeds in Alzheimer's disease
Project leader: Prof. Dr. Mathias Jucker
Funding institution: Academy of Sciences and Humanities in Hamburg

Award for medical research
Project leader: Prof. Dr. Mathias Jucker
Funding institution: MetLife Foundation USA

Donation for Alzheimer research and DIAN (Dominantly Inherited Alzheimer Network)
Project leader: Prof. Dr. Mathias Jucker
Funding institution: Anonymous donor

Intersite research grant DIAN (Tübingen site)
Project leader: Prof. Dr. Mathias Jucker
Funding institution: German Center for Neurodegenerative Diseases (DZNE)

EpiROM: Epigenetic reprogramming of microglia across neurodegenerative diseases (ID18 – EpiROM)
Project leader: Dr. Jonas Neher
Funding institution: Baden-Württemberg Foundation

Single cell transcriptomics for the identification of microglial responder subtypes in Alzheimer's disease
Project leader: Dr. Jonas Neher
Funding institution: ONO Pharmaceuticals (Osaka, Japan)

Verbundprojekt Sonderlinie Medizin Nr. 2440-0-0: Neuroinflammation bei der Neurodegeneration
Project leader: Prof. Dr. Mathias Jucker
Funding institution: Ministry of Science, Research and the Arts, Baden-Württemberg

Third-Party Funding

ONGOING GRANTS

IMPRiND – Inhibiting Misfolded protein Propagation in Neurodegenerative Diseases
Project leader: Prof. Dr. Mathias Jucker
Funding institution: EU Joint Programme – IMI (Innovative Medicines Initiative)

EQIPD (European Quality in Preclinical Data)
Project leader: Prof. Dr. Mathias Jucker
Funding institution: EU Joint Programme – IMI (Innovative Medicines Initiative)

PHD scholarship
Project leader: Ping Liu
Funding institution: China Scholarship Council

Mode of microglial proliferation in ageing and disease
Project leader: Dr. Deborah Kronenberg-Versteeg
Funding institution: Alexander von Humboldt Foundation

IZKF Stipend "Mechanisms of Neuronal Dysfunction and Death in Sepsis-induced Cognitive Impairment"
Project leaders: Linda Oberle, Dr. Jonas Neher
Funding institution: IZKF Promotionskolleg

Longitudinal Study of Individuals that carry Dominantly Inherited Alzheimer's Disease Mutations
Project leader: Prof. Dr. Mathias Jucker
Funding institution: German Center for Neurodegenerative Diseases (DZNE)

Understanding molecular biomarker changes in Alzheimer's disease using genetically-defined mouse models
Project leaders: Prof. Dr. Mathias Jucker, Stephan Käser
Funding institution: Cure Alzheimer's Fund

Structural basis of biologically active Abeta-conformers
Project leader: Prof. Dr. Mathias Jucker
Funding institution: German Research Foundation (DFG)

NEW GRANTS

The human brain's immune response to peripheral inflammation and its role in Alzheimer's disease pathology
(2018_A158)
Project leader: Dr. Jonas Neher
Funding institution: Else Kröner-Fresenius-Stiftung

Profiling epigenetic microglial reprogramming in aging and Alzheimer's disease at single-cell level
(P1200024)
Project leader: Dr. Jonas Neher
Funding institution: Hertie Foundation

Targeting proteopathic seeds at pre-amyloid stages of Alzheimer's disease
Project leader: Dr. Alejandro Ruiz-Riquelme
Funding institution: Alzheimer Forschung Initiative e. V.

Investigating familial forms of dementia with amyloid deposits
Project leader: Prof. Dr. Mathias Jucker
Funding institution: EISAI Co., Ltd.

DIAN: Dominantly Inherited Alzheimer Network – Subaward Agreement
Project leader: Prof. Dr. Mathias Jucker
Funding institution: NIH / Washington University

DIAN: Dominantly Inherited Alzheimer Network – Subaward for TAU work
Project leader: Prof. Dr. Mathias Jucker
Funding institution: NIH / Washington University

Extension: Understanding molecular biomarker changes in Alzheimer's disease using genetically-defined mouse models
Project leaders: Prof. Dr. Mathias Jucker, Stephan Käser
Funding institution: Cure Alzheimer's Fund

Donation for Alzheimer Research and DIAN
Project leader: Prof. Dr. Mathias Jucker
Funding institution: Sigrid-Marx-Stiftung

Extension: EQIPD (European Quality in Preclinical Data)
Project leader: Prof. Dr. Mathias Jucker
Funding institution: EU Joint Programme – IMI (Innovative Medicines Initiative)

Extension: Mode of microglial proliferation in ageing and disease
Project leader: Dr. Deborah Kronenberg-Versteeg
Funding institution: Alexander von Humboldt Foundation

Microglia-amyloid interaction in a unique human adult brain slice culture model
Project leader: Dr. Gaye Tanriöver
Funding institution: Alzheimer Forschung Initiative e. V.

Bridging the translational gap: A novel adult human brain tissue system
Project leader: Dr. Deborah Kronenberg-Versteeg
Funding institution: Chan Zuckerberg Initiative (CZI)

Understanding the mechanisms of neuronal spread, and role of microglia, in neurodegeneration using mouse and human organotypic slice culture seeding models
Project leader: Prof. Dr. Mathias Jucker
Funding institution: Novartis Institutes for BioMedical Research, Inc. (NIBR)

PHD scholarship
Project leader: Ying Xu
Funding institution: China Scholarship Council

Awards

Prof. Dr. Mathias Jucker
International Prize for Translational Neuroscience
Gertrud Reemtsma Foundation

PhD Theses

(Completed in 2020)

Ruth Uhlmann
Early Aß-targeting interventions in mouse models of Alzheimer pathology
Supervisor: Prof. Dr. Mathias Jucker

Natalie Beschorner
Alzheimer's disease and the ß-amyloid peptide: Aß conformers and mechanisms of spreading
Supervisor: Prof. Dr. Mathias Jucker

Master Theses

(Completed in 2020)

Lena Erlebach
A chimeric in vitro model to study Alzheimer's disease pathology and human microglia involvement
Supervisors: Dr. Deborah Kronenberg-Versteeg, Prof. Dr. Mathias Jucker

Julia Koppelmann
The pathobiology of the Medin amyloid in the brain vasculature
Supervisor: Dr. Jonas Neher

Independent Research Groups

Physiology of Learning and Memory

Clinical and Scientific Staff

HEAD OF THE RESEARCH GROUP

Prof. Dr. Ingrid Ehrlich

SCIENTISTS/RESIDENTS

Dr. Ayla Aksoy-Aksel
Dr. Julien Genty

TECHNICAL STAFF/ADMINISTRATION

Andrea Gall

Third-Party Funding

ONGOING GRANTS

Plasticity of intercalated cell microcircuits in fear learning
Project leader: Prof. Dr. Ingrid Ehrlich
Funding institution: German Research Foundation (DFG) (EH197/3-1)

NEW GRANTS

Amygdala synaptic neuromodulatory mechanisms and role of mGlu4 in Autism Spectrum Disorders
Project leader: Prof. Dr. Ingrid Ehrlich
Funding institution: Federal Ministry for Education and Research (BMBF; ERA-NET Neuron Project Magnolia)

Human Intracranial Cognitive Neurophysiology

Clinical and Scientific Staff

HEAD OF THE RESEARCH GROUP

Dr. Dr. Randolph Helfrich

SCIENTISTS/RESIDENTS

Dr. Frank van Schalkwijk
Dr. Michael Hahn

PHD DOCTORAL STUDENTS

Isabel Raposo
Jan Weber

MD DOCTORAL STUDENTS

Markus Kopf

Third-Party Funding

NEW GRANTS

DFG Emmy Noether Program: Rhythmic building blocks of attention
Project leader: Dr. Dr. Randolph Helfrich
Funding institution: German Research Foundation (DFG)

Hertie Network of Excellence in Clinical Neuroscience
Project leader: Dr. Dr. Randolph Helfrich
Funding institution: Hertie Foundation

Baden Württemberg Foundation – Postdoctoral Fellowship
Project leader: Dr. Dr. Randolph Helfrich
Funding institution: Baden-Württemberg Foundation

Molecular Brain Development

Clinical and Scientific Staff

HEAD OF THE RESEARCH GROUP

Dr. Simone Mayer

SCIENTISTS/RESIDENTS

Dr. Shokoufeh Khakipoor
Dr. Lucia Laugwitz
Kseniia Sarieva

TECHNICAL STAFF/ADMINISTRATION

Elisabeth Gustafsson

MASTER STUDENTS

Clemens Lumper

Third-Party Funding

NEW GRANTS

Stabilizing and destabilizing processes of change – Insights from brain and software development
Project leaders: Dr. Simone Mayer, Dr. Christian Mahringer (Stuttgart University)
Funding institution: Heidelberg Akademy of Sciences and Humanities, State of Baden-Württemberg

Dissecting cell type-specific effects of maternal immune activation on the human fetal neocortical development
Project leader: Kseniia Sarieva
Funding institution: State Postgraduate Fellowship Programme, University of Tübingen, State of Baden-Württemberg

Human stem cell-based models of PCH2
Project leaders: Dr. Simone Mayer, Prof. Dr. Ludger Schöls
Funding institution: PCH-Familie e.V.

Conferences & Workshops

Tübingen Neuro Campus Initiative „The Developing Brain“
Regular seminars within the Tübingen Neuro Campus
21 January, 21 April, 22 September 2020
Scientific coordinator: Dr. Simone Mayer

Section of Translational Genomics of Neurodegenerative Diseases

Clinical and Scientific Staff

HEAD OF THE RESEARCH DIVISION

Prof. Dr. Matthis Synofzik

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Dr. Dr. Andreas Traschütz
Dr. Carlo Wilke

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Merit Bade
Theresa Beyme
Julia Göddel-Sand
Dominik Hermle
Julia Maren Ott
Ester Soter

MASTER STUDENTS

Daniela Piechnik

Clinical Studies

PROSPAX: an integrated multimodal progression chart in spastic ataxias
Investigators: Prof. Dr. Matthis Synofzik, PD Dr. Rebecca Schüle, Dr. Dr. Andreas Traschütz, Dr. Christoph Kessler

GENFI - Genetic Frontotemporal dementia Initiative: a multicentre longitudinal progression study in subjects at risk of genetic FTD
Investigators: Prof. Jon Rohrer (UCL), Prof. Dr. Matthis Synofzik et al.

PREPARE GENESIS- a global ataxia NGS consortium for collaborative gene-identification in hereditary ataxias
Investigators: Prof. Stephan Zuchner (Miami), Prof. Dr. Matthis Synofzik

Autosomal-recessive and Early onset ataxia: Genetic basis and natural history (ARCA/EOA)
Investigators: Prof. Dr. Matthis Synofzik, Prof. Dr. Ludger Schöls

Identifying and validating digital-motor progression biomarkers for hereditary ataxias: body-worn sensors (APDM) and upper limb sensors (q-motor)
Investigators: Prof. Dr. Matthis Synofzik, Dr. Winfried Ilg, Dr. Andreas Traschütz

Fluid biomarkers as progression and treatment-response biomarkers in Frontotemporal Dementia, Alzheimer's disease, and degenerative ataxias
Investigators: Prof. Dr. Matthis Synofzik, Dr. David Mengel, Dr. Carlo Wilke

Solving the unsolved Rare Diseases (Solve-RD)
Investigators: PD Dr. Rebecca Schüle, Prof. Dr. Matthis Synofzik, Prof. Dr. Ludger Schöls

Section of Translational Genomics of Neurodegenerative Diseases

Clinical Studies

Sporadic ataxia with adult onset: Natural history study (SPORTAX)
Investigators: Prof. Dr. Ludger Schöls, Prof. Dr. Matthis Synofzik, Prof. Dr. Thomas Klockgether (Bonn)

ESMI: European Spinocerebellar Ataxia Type 3 / Machado-Joseph Disease Initiative
Investigators: Prof. Dr. Ludger Schöls, Dr. Holger Hengel, Prof. Dr. Matthis Synofzik, Dr. Winfried Ilg

Detecting PreAtaxia: A mixed challenge strategy to identify ataxia at its preclinical stage
Investigators: Prof. Dr. Matthis Synofzik, Dr. Winfried Ilg

SPEECH-Atax: A randomised delayed entry trial of intensive home-based speech therapy in spinocerebellar ataxias
Investigators: Prof. Dr. Matthis Synofzik, Dr. Adam Vogel (University of Melbourne)

Phenotype, Genotype and Biomarkers in ALS and Related Disorders (Clinical Research in ALS and Related Disorders for Therapeutic Development Consortium / CReATe)
Investigators: PD Dr. Rebecca Schüle, PD Dr. Inga Liepelt-Scarfone, Prof. Dr. Matthis Synofzik, Dr. Christoph Kessler, Dr. Carlo Wilke

Third-Party Funding

ONGOING GRANTS

EU Horizon 2020 RIA Research and Innovation action: Solving the Unsolved Rare Diseases (Solve RD)
Co-Project leaders: Prof. Dr. Matthis Synofzik, PD Dr. Rebecca Schüle
Funding institution: EU

Etablierung einer Messmethode zur quantitativen Erfassung von Bewegungsparametern im Lebensumfeld bei Patienten mit degenerativer Ataxie
Project leader: Prof. Dr. Matthis Synofzik
Funding institution: German Heredo-Ataxia Society

Unravelling progression biomarkers in ARSACS: a multicenter transmodal combined fluid biomarker and magnetic resonance imaging study
Project leader: Prof. Dr. Matthis Synofzik
Funding institution: Fondation de l'Ataxie Charlevoix, Saguenay

Neurofilamente als blutbasierter Progressions- und Therapie-Biomarker für SCA3: eine speziesübergreifende Analyse bei SCA3-Patienten und SCA3-Mäusen
Project leader: Prof. Dr. Matthis Synofzik
Funding institution: Stiftung Hoffnung

Bronya J. Keats International Research Collaboration Award: Speech Trial in FA
Project leaders: Prof. Dr. Matthis Synofzik, Dr. Adam Vogel
Funding institution: Friedreich's Ataxia Research Alliance (FARA)

SpeechAtax: A rater-blinded randomised controlled trial of intensive home-based speech treatment for ataxia
Co-Project leaders: Dr. Adam Vogel, Prof. Dr. Matthis Synofzik
Funding Institution: Australian National Health and Research Council-MRFF-Research Gate

GENFI-prox: Defining measures of proximity to symptom onset in the GENetic Frontotemporal dementia Initiative
Project leader: Prof. Dr. Matthis Synofzik
Funding: European Union JPND program/BMBF

PROSPAX: an integrated multimodal progression chart in spastic ataxias (EJP consortium)
Project leaders: Prof. Dr. Matthis Synofzik, PD Dr. Rebecca Schüle
Funding: European Union EJP RD program/DFG

Neurofilament Light Chain as an individual stratification and treatment-response blood biomarker for SCA3
Project leader: Prof. Dr. Matthis Synofzik
Funding: Zentrum für Seltene Erkrankungen, Tübingen

NEW GRANTS

Designing a toolbox of paradigmatic treatments for a targeted molecular medicine approach to autosomal-recessive ataxias (TREAT-ARCA)
Project leaders: Prof. Dr. Matthis Synofzik, Prof. Dr. Helene Puccio (Lyon)
Funding Institution: European Union EJP RD program/BMBF

Conferences & Workshops

Ataxia Global Initiative 2020
Virtual Meeting, 19-21 October 2020
Scientific coordinators: Prof. Dr. Matthis Synofzik, Prof. Dr. Thomas Klockgether, Dr. Holm Graessner

PREPARE GENESIS 2020
Virtual Meeting, 4 December 2020
Scientific coordinators: Prof. Dr. Matthis Synofzik, Prof. Dr. Stephan Zuchner

Deutsche Akademie für Seltene Neurologische Erkrankungen (DASNE) 2020
Virtual Meeting, 27 October 2020
Scientific coordinators: Prof. Dr. Alexander Münchau, Prof. Dr. Ludger Schöls, Dr. Holm Graessner
Panel member: Prof Dr. Matthis Synofzik et al.

MD Theses

(Completed in 2020)

Zofia Fleszar
Assessing movement changes in degenerative ataxias: from the pre-ataxic disease stage to the effects of a bio-feedback intervention
Supervisor: Prof. Dr. Matthis Synofzik

Karla Lauer
Die Rolle des parietalen Kortex bei der Wahrnehmung der eigenen Bewegungen
Supervisor: Prof. Dr. Matthis Synofzik

Master Theses

(Completed in 2020)

Daniela Piechnik
Longitudinal analysis of cortical thickness of genetic frontotemporal dementia patients in relation to fluid biomarkers
Supervisor: Prof. Dr. Matthis Synofzik

HIH Management

Management Staff

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COORDINATOR TÜBINGEN NEURO CAMPUS

Silke Dutz

Publications and Student Training in 2020

List of Publications in 2020

(In alphabetical order)

Peer Reviewed Articles

Abdelhak A, Huss A, Bruck A, Sebert U, Mayer B, Muller HP, Tumani H, Otto M, Yilmazer-Hanke D, Ludolph AC, Kassubek J, Pinkhardt E, Neugebauer H (2020) Optical coherence tomography-based assessment of retinal vascular pathology in cerebral small vessel disease. *Neurological Research and Practice* 2:13

Abdelhak A, Huss A, Stahmann A, Senel M, **Krumbholz M, Kowarik MC**, Havla J, Kumpfel T, Kleiter I, Wustinger I, Zettl UK, Schwartz M, Roesler R, Friede T, Ludolph AC, **Ziemann U**, Tumani H (2020) Explorative study of emerging blood biomarkers in progressive multiple sclerosis (embioproms): Design of a prospective observational multicentre pilot study. *Contemporary Clinical Trials Communications* 18:100574

Abrahamyan S, Eberspacher B, Hoshi MM, Aly L, Luessi F, Groppa S, Klotz L, Meuth SG, Schroeder C, Gruter T, Tackenberg B, Paul F, Then-Bergh F, Kumpfel T, Weber F, Stangel M, Bayas A, Wildemann B, Heesen C, Zettl U, Warnke C, Antony G, Hessler N, Wiendl H, Bittner S, Hemmer B, Gold R, Salmen A, Ruprecht K, German Competence Network Multiple S – **Ziemann U** et al (2020) Complete Epstein-Barr virus seropositivity in a large cohort of patients with early multiple sclerosis. *Journal of Neurology, Neurosurgery and Psychiatry* 91:681-86

Abu-Rumeileh S, **Abdelhak A**, Foschi M, Tumani H, Otto M (2021) Guillain-Barre syndrome spectrum associated with Covid-19: An up-to-date systematic review of 73 cases. *Journal of Neurology* 268:1133-70

Aksoy-Aksel A, Genty J, Zeller M, Ehrlich I (2020) Studying neuronal function ex vivo using optogenetic stimulation and patch clamp. *Methods in Molecular Biology* 2173:1-20

Allen NM, Weckhuysen S, Gorman K, King MD, **Lerche H** (2020) Genetic potassium channel-associated epilepsies: Clinical review of the K_V family. *European Journal of Paediatric Neurology* 24:105-16

Altmann A, Cash DM, Bocchetta M, Heller C, Reynolds R, Moore K, Convery RS, Thomas DL, van Swieten JC, Moreno F, Sanchez-Valle R, Borroni B, Laforce R, Jr., Masellis M, Tartaglia MC, Graff C, Galimberti D, Rowe JB, Finger E, **Synofzik M**, Vandenberghe R, de Mendonca A, Tagliavini F, Santana I, Ducharme S, Butler CR, Gerhard A, Levin J, Danek A, Frisoni G, Ghidoni R, Sorbi S, Otto M, Ryten M, Rohrer JD, Genetic Ftd Initiative G (2020) Analysis of brain atrophy and local gene expression in genetic frontotemporal dementia. *Brain Communications* 2:fcaa122

Armento A, Honisch S, Panagiotakopoulou V, Sonntag I, Jacob A, Bolz S, Kilger E, **Deleidi M**, Clark S, Ueffing M (2020) Loss of Complement Factor H impairs antioxidant capacity and energy metabolism of human RPE cells. *Scientific Reports* 10:15

Atalaia A, Thompson R, Corvo A, Carmody L, Piscia D, Matalonga L, Macaya A, Lochmuller A, Fontaine B, Zurek B, Hernandez-Ferrer C, Rheinard C, Gomez-Andres D, Desaphy J-F, Schon K, Lohmann K, Jennings MJ, **Synofzik M**, Riess O, Ben Yaou R, Evangelista T, Ratnaike T, Bros-Facer V, Gumus G, Horvath R, Chinnery P, Laurie S, Graessner H, Robinson P, Lochmuller H, Beltran S, Bonne G (2020) A guide to writing systematic reviews of rare disease treatments to generate fair-compliant datasets: Building a treatabolome. *Orphanet Journal of Rare Diseases* 15:206

Baldini F, Hertel J, Sandt E, Thinnes CC, Neuberger-Castillo L, Pavelka L, Betsou F, Krueger R, Thiele I, Consortium N-P – **Brockmann K, Gasser T, Liepelt-Scarfone I** et al (2020) Parkinson's disease-associated alterations of the gut microbiome predict disease-relevant changes in metabolic functions. *BMC Biology* 18:62

Ballarini T, Albrecht F, Mueller K, Jech R, Diehl-Schmid J, Fliessbach K, Kassubek J, Lauer M, Fassbender K, Schneider A, **Synofzik M**, Wiltfang J, Otto M, Schroeter ML, FTLD Consortium Germany; 4RTNI (2020) Disentangling brain functional network remodeling in corticobasal syndrome - a multimodal MRI study. *NeuroImage Clinical* 25:102112

Barahona-Correa JB, Cotovio G, Costa RM, Ribeiro R, Velosa A, Silva VCE, **Sperber C, Karnath HO**, Senova S, Oliveira-Maia AJ (2020) Right-sided brain lesions predominate among patients with lesional mania: Evidence from a systematic review and pooled lesion analysis. *Translational Psychiatry* 10:139

Barbe MT, Tonder L, Krack P, Debu B, Schupbach M, Paschen S, Dembek TA, Kuehn AA, Fraix V, Brefel-Courbon C, Wojtecki L, Maltete D, Damier P, Sixel-Doering F, **Weiss D**, Pinsker M, Witjas T, Thobois S, Schade-Brittinger C, Rau J, Houeto J-L, Hartmann A, Timmermann L, Schnitzler A, Stoker V, Vidailhet M, Deuschl G, Knudsen K, Volkmann J, Falk D, Mehdorn M, Haelbig TD, Hesekamp H, Navarro SM, Meier N, Agid Y, Seigneuret E, Kistner A, Chaynes P, Ory-Magne F, Bataille B, Raoul S, Regis JM, Mertens P, Helwig D, Oertel WH, Maarouf M, Fink GR, Kupsch A, Gruber D, Schneider GH, Vesper J, Gharabaghi A, Krueger R, Amtage F, Grp ES (2020) Deep brain stimulation for freezing of gait in Parkinson's disease with early motor complications. *Movement Disorders* 35:82-90

Barbuti P, Antony P, Santos B, Massart F, Cruciani G, Dording C, Arias J, Schwamborn J, **Krueger R** (2020) Using high-content screening to generate single-cell gene-corrected patient-derived iPS clones reveals excess alpha-synuclein with familial parkinson's disease point mutation A30P. *Cells* 9:2065

Barbuti PA, Santos BFR, Dording CM, Cruciani G, Massart F, **Hummel A, Krueger R** (2020) Generation of two iPS cell lines (HIHDNDi001-A and HIHDNDi001-B) from a parkinson's disease patient carrying the heterozygous p.A30P mutation in SNCA. *Stem Cell Research* 48:101951

Barthelemy NR, Li Y, Joseph-Mathurin N, Gordon BA, Hassenstab J, Benzinger TLS, Buckles V, Fagan AM, Perrin RJ, Goate AM, Morris JC, Karch CM, Xiong C, Allegri R, Mendez PC, Berman SB, Ikeuchi T, Mori H, Shimada H, Shoji M, Suzuki K, Noble J, Farlow M, Chhatwal J, Graff-Radford NR, Salloway S, Schofield PR, Masters CL, Martins RN, O'Connor A, Fox NC, Levin J, **Jucker M**, Gabelle A, Lehmann S, Sato C, Bateman RJ, McDade E, Dominantly Inherited Alzheimer N (2020) A soluble phosphorylated tau signature links tau, amyloid and the evolution of stages of dominantly inherited Alzheimer's disease. *Nature Medicine* 26:398-407

Baur D, Galevska D, Hussain S, Cohen LG, **Ziemann U, Zrenner C** (2020) Induction of LTD-like corticospinal plasticity by low-frequency rTMS depends on pre-stimulus phase of sensorimotor mu-rhythm. *Brain Stimulation* 13:1580-87

Becker S, Baeumer A, Maetzler W, Nussbaum S, Timmers M, Van Nueten L, Salvadore G, Zaunbrecher D, **Roeben B, Brockmann K**, Streffer J, **Berg D, Liepelt-Scarfone I** (2020) Assessment of cognitive-driven activity of daily living impairment in non-demented Parkinson's patients. *Journal of Neuropsychology* 14:69-84

Becker S, Baeumer A, Maetzler W, Nussbaum S, Tkaczynska Z, Sulzer P, Timmers M, Van Nueten L, Salvadore G, **Brockmann K**, Streffer J, **Berg D, Liepelt-Scarfone I** (2020) Association of cognitive activities of daily living (ADL) function and nonmotor burden in nondemented Parkinson's disease patients. *Neuropsychology* 34:447-55

Behling F, Fodi C, **Gepfner-Tuma I**, Machetanz K, **Renovanz M**, Skardelly M, Bornemann A, Honegger J, **Tabatabai G**, Tatagiba M, Schittenhelm J (2020) CNS invasion in meningioma-how the intraoperative assessment can improve the prognostic evaluation of tumor recurrence. *Cancers* 12:3620

Beschle J, Doring M, Kehrer C, Raabe C, Bayha U, Strolin M, Bohringer J, Bevot A, Kaiser N, Bender B, **Grimm A**, Lang P, Muller I, Krageloh-Mann I, Groeschel S (2020) Early clinical course after hematopoietic stem cell transplantation in children with juvenile metachromatic leukodystrophy. *Molecular and Cellular Pediatrics* 7:12

Bhattacharjee A, Kajal DS, Patrono A, Hegner YL, Zampini M, **Schwarz C, Braun C** (2020) A tactile virtual reality for the study of active somatosensation. *Frontiers in Integrative Neuroscience* 14:15

Bis-Brewer DM, Gan-Or Z, Sleiman P, Hakonarson H, Fazal S, Courel S, Cintra V, Tao FF, Estiar MA, Tarnopolsky M, Boycott KM, Yoon G, Suchowersky O, Dupre N, Cheng A, Lloyd TE, Rouleau G, **Schule R**, Zuchner S, Inherited Neuropathy C (2020) Assessing non-mendelian inheritance in inherited axonopathies. *Genetics in Medicine* 22:2114-19

Bittner S, Steffen F, Uphaus T, Muthuraman M, Fleischer V, Salmen A, Luessi F, Berthele A, Klotz L, Meuth SG, Bayas A, Paul F, Hartung HP, Linker R, Heesen C, Stangel M, Wildemann B, Then Bergh F, Tackenberg B, Kuempfel T, Weber F, Zettl UK, **Ziemann U**, Tumani H, Groppa S, Muhlau M, Lukas C, Hemmer B, Wiendl H, Gold R, Zipp F, consortium K (2020) Clinical implications of serum neurofilament in newly diagnosed ms patients: A longitudinal multicentre cohort study. *EBioMedicine* 56:102807

Bitzer M, Ostermann L, Horger M, Biskup S, Schulze M, Ruhm K, Hilke F, Öner Ö, Nikolaou K, Schroeder C, Riess O, Fend F, Zips D, Hinterleitner M, Zender L, **Tabatabai G**, Beha J, Malek NP (2020) Next-generation sequencing of advanced gi tumors reveals individual treatment options. *JCO Precision Oncology* 4:PO.19.00359

Blauwendraat C, Reed X, Krohn L, Heilbron K, Bandres-Ciga S, Tan M, Gibbs JR, Hernandez DG, Kumaran R, Langston R, Bonet-Ponce L, Alcalay RN, Hassin-Baer S, Greenbaum L, Iwaki H, Leonard HL, Grenn FP, Ruskey JA, Sabir M, Ahmed S, Makarious MB, Pihlstrom L, Toft M, van Hilten JJ, Marinus J, **Schulte C, Brockmann K**, Sharma M, Siitonen A, Majamaa K, Eerola-Rautio J, Tienari PJ, Pantelyat A, Hillis AE, Dawson TM, Rosenthal LS, Albert MS, Resnick SM, Ferrucci L, Morris CM, Pletnikova O, Troncoso J, Grosset D, Lesage S, Corvol J-C, Brice A, Noyce AJ, Masliah E, Wood N, Hardy J, Shulman LM, Jankovic J, Shulman JM, **Heutink P, Gasser T**, Cannon P, Scholz SW, Morris H, Cookson MR, Nalls MA, Gan-Or Z, Singleton AB, on behalf of the International Parkinson's Disease Genomics Consortium – IPDGC (2020) Genetic modifiers of risk and age at onset in GBA associated Parkinson's disease and Lewy body dementia. *Brain* 143:234-48

Bogadhi AR, Buonocore A, Hafed ZM (2020) Task-irrelevant visual forms facilitate covert and overt spatial selection. *Journal of Neuroscience* 40:9496-506

Borsche M, Konig IR, Delcambre S, Petrucci S, Balck A, Bruggemann N, Zimprich A, Wasner K, Pereira SL, Avenali M, **Deuschle C**, Badanjak K, Ghelfi J, **Gasser T**, Kasten M, Rosenstiel P, Lohmann K, **Brockmann K**, Valente EM, Youle RJ, Grunewald A, Klein C (2020) Mitochondrial damage-associated inflammation highlights biomarkers in PRKN/PINK1 Parkinsonism. *Brain* 143:3041-51

Bosselmann CM, Gepfner-Tuma I, Schittenhelm J, Brendle C, Honegger J, **Tabatabai G** (2020) Papillary tumor of the pineal region: A single-center experience. *Neuro-Oncology Practice* 7:384-90

Bourcier D, Belanger M, Cote I, Brais B, **Synofzik M**, Brisson J-D, Rodrigue X, Gagnon M-M, Mathieu J, Gagnon C (2020) Documenting the psychometric properties of the scale for the assessment and rating of ataxia to advance trial readiness of autosomal recessive spastic ataxia of Charlevoix-Saguenay. *Journal of the Neurological Sciences* 417:117050

Boussaad I, **Obermaier CD**, Hanss Z, Bobbili DR, Bolognin S, Glaab E, Wolynska K, Weisschuh N, De Conti L, May C, Giesert F, Grossmann D, Lambert A, Kirchen S, Biryukov M, Burbulla LF, Massart F, Bohler J, Cruciani G, Schmid B, Kurz-Drexler A, May P, Duga S, Klein C, Schwamborn JC, Marcus K, Woitalla D, Weisenhorn DMV, Wurst W, Baralle M, Krainc D, **Gasser T**, Wissinger B, **Krueger R** (2020) A patient-based model of RNA mis-splicing uncovers treatment targets in Parkinson's disease. *Science Translational Medicine* 12:eaau3960

Brendle C, Klose U, Hempel JM, Schittenhelm J, Skardelly M, **Tabatabai G**, Ernemann U, Bender B (2020) Association of dynamic susceptibility magnetic resonance imaging at initial tumor diagnosis with the prognosis of different molecular glioma subtypes. *Neurological Sciences* 41:3625-32

Brockmann K (2020) GBA-associated synucleinopathies: Prime candidates for alpha-synuclein targeting compounds. *Frontiers in Cell and Developmental Biology* 8:7

Brunklaus A, Du JJM, Steckler F, Ghanty, II, Johannesen KM, Fenger CD, Schorge S, Baez-Nieto D, Wang HR, Allen A, Pan JQ, **Lerche H**, Heyne H, Symonds JD, Zuberi SM, Sanders S, Sheidley BR, Craiu D, Olson HE, Weckhuysen S, DeJonge P, Helbig I, Van Esch H, Busa T, Milh M, Isidor B, Depienne C, Poduri A, Campbell AJ, Dimidschstein J, Moller RS, Lal D (2020) Biological concepts in human sodium channel epilepsies and their relevance in clinical practice. *Epilepsia* 61:387-99

Bus C, Zizmare L, Feldkaemper M, **Geisler S, Zarani M, Schaedler A**, Klose F, Admard J, Mageean CJ, Arena G, Fallier-Becker P, Ugun-Klusek A, Maruszczak KK, **Kapolou K, Schmid B**, Rapaport D, Ueffing M, Casadei N, Kruger R, **Gasser T**, Weisenhorn DMV, **Kahle PJ**, Trautwein C, Gloeckner CJ, **Fitzgerald JC** (2020) Human dopaminergic neurons lacking PINK1 exhibit disrupted dopamine metabolism related to vitamin B6 co-factors. *Iscience* 23:101797

Caporali L, Magri S, Legati A, Del Dotto V, Tagliavini F, Balistreri F, Nasca A, La Morgia C, Carbonelli M, Valentino ML, Lamantea E, Baratta S, Schoels L, Schuele R, Barboni P, Cascavilla ML, Maresca A, Capristo M, Ardissone A, Pareyson D, Cammarata G, Melzi L, Zeviani M, Peverelli L, Lamperti C, Marzoli SB, Fang M, **Synofzik M**, Ghezzi D, Carelli V, Taroni F (2020) ATPase domain AFG3l2 mutations alter OPA1 processing and cause optic neuropathy. *Annals of Neurology* 88:18-32

Castillo-Barnes D, Su L, Ramirez J, Salas-Gonzalez D, Martinez-Murcia FJ, Illan IA, Segovia F, Ortiz A, Cruchaga C, Farlow MR, Xiong C, Graff-Radford NR, Schofield PR, Masters CL, Salloway S, **Jucker M**, Mori H, Levin J, Gorriz JM, Dominantly Inherited Alzheimer N (2020) Autosomal dominantly inherited Alzheimer disease: Analysis of genetic subgroups by machine learning. *Information Fusion* 58:153-67

Cebi I, Scholten M, Gharabaghi A, **Weiss D** (2020) Clinical and kinematic correlates of favorable gait outcomes from subthalamic stimulation. *Frontiers in Neurology* 11:10

Chatron N, **Becker F**, Morsy H, Schmidts M, Hardies K, Tuysuz B, Roselli S, Najafi M, Alkaya DU, Ashrafzadeh F, Nabil A, Omar T, Maroofian R, Karimiani EG, Hussien H, Kok F, Ramos L, Gunes N, Bilguvar K, Labalme A, Alix E, Sanlaville D, de Bellescize J, Poulat AL, Moslemi AR, Lerche H, May P, Lesca G, Weckhuysen S, Tajsharghi H, EuroEpinomics RESCARW (2020) Bi-allelic GAD1 variants cause a neonatal onset syndromic developmental and epileptic encephalopathy. *Brain* 143:1447-61

Chen Y, Sobczak F, Pais-Roldan P, **Schwarz C**, Koretsky AP, Yu X (2020) Mapping the brain-wide network effects by optogenetic activation of the corpus callosum. *Cerebral Cortex* 30:5885-98

Cheng B, Boutitie F, Nickel A, Wouters A, Cho TH, Ebinger M, Endres M, Fiebach JB, Fiehler J, Galinovic I, Puig J, Thijs V, Lemmens R, Muir KW, Nighoghossian N, Pedraza S, Simonsen CZ, Gerloff C, Thomalla G, WAKE-UP Investigators – **Poli S, Ziemann U, Gaenslen A, Schlak D, Haertig F, Russo F, Richter H, Ebner M, Ribitsch M, Wolf M** et al (2020) Quantitative signal intensity in fluid-attenuated inversion recovery and treatment effect in the wake-up trial. *Stroke* 51:209-15

Choi JH, **Poli S**, Chen M, Nguyen TN, Saver JL, Matouk C, Pile-Spellman J (2020) Selective brain hypothermia in acute ischemic stroke: Reperfusion without reperfusion injury. *Frontiers in Neurology* 11:594289

Claassen DO, Corey-Bloom J, Dorsey ER, Edmondson M, Kostyk SK, LeDoux MS, **Reilmann R**, Rosas HD, Walker F, Wheelock V, Svrzikapa N, Longo KA, Goyal J, Hung S, Panzara MA (2020) Genotyping single nucleotide polymorphisms for allele-selective therapy in Huntington disease. *Neurology-Genetics* 6:7

Convery RS, Bocchetta M, Greaves CV, Moore KM, Cash DM, Van Swieten J, Moreno F, Sanchez-Valle R, Borroni B, Laforce R, Jr., Masellis M, Tartaglia MC, Graff C, Galimberti D, Rowe JB, Finger E, **Synofzik M**, Vandenberghe R, de Mendonca A, Tagliavini F, Santana I, Ducharme S, Butler C, Gerhard A, Levin J, Danek A, Otto M, Warren JD, Rohrer JD, Genetic FTDIG (2020) Abnormal pain perception is associated with thalamo-cortico-striatal atrophy in C9orf72 expansion carriers in the GENFI cohort. *Journal of Neurology, Neurosurgery and Psychiatry* 91:1325-28

Cortese A, Zhu Y, Rebelo AP, Negri S, Courel S, Abreu L, Bacon CJ, Bai Y, Bis-Brewer DM, Bugiardini E, Buglo E, Danzi MC, Feely SME, Athanasiou-Fragkouli A, Haridy NA, Isasi R, Khan A, Laura M, Magri S, Pipis M, Pisciotta C, Powell E, Rossor AM, Saveri P, Sowden JE, Tozza S, Vandrovcova J, Dallman J, Grignani E, Marchioni E, Scherer SS, Tang B, Lin Z, Al-Ajmi A, **Schuele R, Synofzik M**, Maisonobe T, Stojkovic T, Auer-Grumbach M, Abdelhamed MA, Hamed SA, Zhang R, Manganelli F, Santoro L, Taroni F, Pareyson D, Houlden H, Herrmann DN, Reilly MM, Shy ME, Zhai RG, Zuchner S, Inherited Neuropathy C (2020) Biallelic mutations in sord cause a common and potentially treatable hereditary neuropathy with implications for diabetes. *Nature Genetics* 52:473-81

Danielyan L, Schwab M, Siegel G, Brawek B, Garaschuk O, Asavapanumas N, Buadze M, Lourhmati A, Wendel HP, Avci-Adali M, Krueger MA, Calaminus C, **Naumann U**, Winter S, Schaeffeler E, Spogis A, Beer-Hammer S, **Neher JJ**, Spohn G, Kretschmer A, Kramer-Albers EM, Barth K, Lee HJ, Kim SU, Frey WH, 2nd, Claussen CD, Hermann DM, Doeppner TR, Seifried E, Gleiter CH, Northoff H, Schafer R (2020) Cell motility and migration as determinants of stem cell efficacy. *EBioMedicine* 60:102989

Degenhardt K, Wagner J, Skodras A, Candlish M, Koppelmann AJ, Wild K, **Maxwell R, Rotermund C**, von Zweydorf F, Gloeckner CJ, Davies HA, Madine J, Del Turco D, Feederle R, Lashley T, Deller T, **Kahle P**, Hefendehl JK, **Jucker M, Neher JJ** (2020) Medin aggregation causes cerebrovascular dysfunction in aging wild-type mice. *Proceedings of the National Academy of Sciences of the United States of America* 117:23925-31

Dhingra A, Tager J, Bressan E, Rodriguez-Nieto S, Bedi MS, Broer S, Sadikoglou E, Fernandes N, Castillo-Lizardo M, Rizzu P, **Heutink P** (2020) Automated production of human induced pluripotent stem cell-derived cortical and dopaminergic neurons with integrated live-cell monitoring. *JoVE-Journal of Visualized Experiments* 162:29

Dias Leao MT, Wiesinger L, **Ziemann U**, Tatagiba M, Naros G (2020) Rapid motor cortical reorganization following subacute spinal cord dysfunction. *Brain Stimulation* 13:783-85

Diener HC, Sacco RL, Easton JD, Granger CB, Bar M, Bernstein RA, Brainin M, Brueckmann M, Cronin L, Donnan G, Gdovinova Z, Grauer C, Kleine E, Kleinig TJ, Lyrer P, Martins S, Meyerhoff J, Milling T, Pfeilschifter W, **Poli S**, Reif M, Rose DZ, Sanak D, Schabitz WR (2020) Antithrombotic treatment of embolic stroke of undetermined source: RE-SPECT ESUS Elderly and renally impaired subgroups. *Stroke* 51:1758-65

Doring JH, Saffari A, Bast T, Brockmann K, Ehrhardt L, Fazeli W, Janzarik WG, Kluger G, Muhle H, Moller RS, Platzer K, Santos JL, Bache I, Bertsche A, Bonfert M, Borggrafe I, Broser PJ, Datta AN, Hammer TB, Hartmann H, Hasse-Wittmer A, Henneke M, Kuhne H, Lemke JR, Maier O, Matzker E, Merkenschlager A, Opp J, Patzer S, Rostasy K, Stark B, Strzelczyk A, von Stulpnagel C, **Weber Y**, Wolff M, Zirn B, Hoffmann GF, Kolker S, Syrbe S (2020) The phenotypic spectrum of PRRT2-associated paroxysmal neurologic disorders in childhood. *Biomedicines* 8:14

Dorner M, Schreiber F, Stephanik H, Tempelmann C, **Winter N, Stahl JH, Wittlinger J, Willikens S, Kramer M**, Heinze HJ, Vielhaber S, Schelle T, **Grimm A**, Schreiber S (2020) Peripheral nerve imaging aids in the diagnosis of immune-mediated neuropathies-a case series. *Diagnostics* 10:11

Du JJM, Simmons S, Brunklaus A, Adiconis X, Hession CC, Fu ZY, Li YQ, Shema R, Moller RS, Barak B, Feng GP, Meisler M, Sanders S, **Lerche H**, Campbell AJ, McCarroll S, Levin JZ, Lal D (2020) Differential excitatory vs inhibitory scn expression at single cell level regulates brain sodium channel function in neurodevelopmental disorders. *European Journal of Paediatric Neurology* 24:129-33

Egger-Rainer A, Trinka E, Zimmermann G, Arnold S, **Bosselmann C**, Hamer H, Hengsberger A, Lang J, **Lerche H**, Noachtar S, Pataraia E, Schulze-Bonhage A, Staack AM, Unterberger I, Lorenzl S (2020) Assessing comfort in the epilepsy monitoring unit: Psychometric testing of an instrument. *Epilepsy & Behavior* 112:9

Elsayed LEO, Mohammed IN, Hamed AAA, Elseed MA, Salih MAM, Yahia A, Abubaker R, **Koko M**, Abd Allah ASI, Elbashir MI, Ibrahim ME, Brice A, Ahmed AE, Stevanin G (2020) Novel homozygous missense mutation in the ARG1 gene in a large Sudanese family. *Frontiers in Neurology* 11:7

Eltokhi A, Kurpiers B, Pitzer C (2020) Behavioral tests assessing neuropsychiatric phenotypes in adolescent mice reveal strain- and sex-specific effects. *Scientific Reports* 10:15

Fehlmann T, Lehallier B, Schaum N, Hahn O, Kahraman M, Li YP, Grammes N, Geffers L, Backes C, Balling R, Kern F, Kruger R, Lammert F, Ludwig N, Meder B, Fromm B, Maetzler W, Berg D, **Brockmann K, Deuschle C, von Thaler AK**, Eschweiler GW, Milman S, Barziliai N, Reichert M, Wyss-Coray T, Meese E, Keller A (2020) Common diseases alter the physiological age-related blood microrna profile. *Nature Communications* 11:14

Feria Pliego JA, Pedroarena CM (2020) Kv1 potassium channels control action potential firing of putative gabaergic deep cerebellar nuclear neurons. *Scientific Reports* 10:6954

Ferro JM, Coutinho JM, Jansen O, Bendszus M, Dentali F, Kobayashi A, van der Veen B, Miede C, Caria J, Huisman H, Diener HC, RE-SPECT CVT Study Group – **Poli S** et al (2020) Dural arteriovenous fistulae after cerebral venous thrombosis. *Stroke* 51:3344-47

Finsterwalder S, Vlegels N, Gesierich B, Araque Caballero MA, Weaver NA, Franzmeier N, Georgakis MK, Konieczny MJ, Koek HL, Dominantly Inherited Alzheimer N, Karch CM, Graff-Radford NR, Salloway S, Oh H, Allegri RF, Chhatwal JP, group Ds, Jessen F, Duzel E, Dobisch L, Metzger C, Peters O, Incesoy EI, Priller J, Spruth EJ, Schneider A, Fliessbach K, Buerger K, Janowitz D, Teipel SJ, Kilimann I, **Laske C**, Buchmann M, Heneka MT, Brosseron F, Spottke A, Roy N, Ertl-Wagner B, Scheffler K, Alzheimer's Disease Neuroimaging I, Utrecht VCIsg, Seo SW, Kim Y, Na DL, Kim HJ, Jang H, Ewers M, Levin J, Schmidt R, Pasternak O, Dichgans M, Biessels GJ, Duering M (2020) Small vessel disease more than Alzheimer's disease determines diffusion MRI alterations in memory clinic patients. *Alzheimer's & Dementia* 16:1504-14

Frey BM, Boutitie F, Cheng B, Cho TH, Ebinger M, Endres M, Fiebach JB, Fiehler J, Ford I, Galinovic I, Konigsberg A, Puig J, Roy P, Wouters A, Magnus T, Thijs V, Lemmens R, Muir KW, Nighoghossian N, Pedraza S, Simonsen CZ, Gerloff C, Thomalla G, WAKE-UP Investigators – **Poli S, Ziemann U, Gaenslen A, Schlak D, Haertig F, Russo F, Richter H, Ebner M, Ribitsch M, Wolf M** et al (2020) Safety and efficacy of intravenous thrombolysis in stroke patients on prior antiplatelet therapy in the wake-up trial. *Neurological Research and Practice* 2:40

Fuchs S, Bode L, Ernst J, **Marquetand J**, von Kanel R, Bottger S (2020) Delirium in elderly patients: Prospective prevalence across hospital services. *General Hospital Psychiatry* 67:19-25

Galer PD, Ganesan S, Lewis-Smith D, McKeown SE, Pendziwiat M, Helbig KL, Ellis CA, Rademacher A, Smith L, Poduri A, **Seiffert S**, von Spiczak S, Muhle H, van Baalen A, Thomas RH, Krause R, **Weber Y**, Helbig I, Grp NS, Investigators E, Euro E-RESC, Genomics Res Innovation N (2020) Semantic similarity analysis reveals robust gene-disease relationships in developmental and epileptic encephalopathies. *American Journal of Human Genetics* 107:683-97

Gasperi C, Andlauer TFM, Keating A, Knier B, Klein A, Pernpeintner V, Lichtner P, Gold R, Zipp F, Then Bergh F, Stangel M, Tumani H, Wildemann B, Wiendl H, Bayas A, Kumpfel T, Zettl UK, Linker RA, **Ziemann U**, Knop M, Warnke C, Friese MA, Paul F, Tackenberg B, Berthele A, Hemmer B (2020) Genetic determinants of the humoral immune response in ms. *Neurology: Neuroimmunology & Neuroinflammation* 7:e827

Gassner H, Jensen D, Marxreiter F, Kletsch A, Bohlen S, Schubert R, Muratori LM, Eskofier B, Klucken J, Winkler J, **Reilmann R**, Kohl Z (2020) Gait variability as digital biomarker of disease severity in Huntington's disease. *Journal of Neurology* 267:1594-601

Glenday JD, Steinhilber B, Jung F, **Haeufle DFB** (2020) Development of a musculoskeletal model of the wrist to predict frictional work dissipated due to tendon gliding resistance in the carpal tunnel. *Computer Methods in Biomechanics and Biomedical Engineering*:1-14

Goebel S, Knuth C, Damm M, Linden D, Coburger J, Ringel F, **Tabatabai G**, Mehdorn M, **Renovanz M** (2020) Towards the targeted assessment of relevant problems: Optimization of the distress thermometer for adult neuro-oncological patients. *Psycho-Oncology* 29:2057-66

Gorges M, Kunz MS, Mueller H-P, Liepelt-Scarfone I, Storch A, Dodel R, Hilker-Roggendorf R, Berg D, Kalbe E, Braak H, Del Tredici K, Baudrexel S, Huppertz H-J, Kassubek J, Mollenhauer B, Schulz J, Spottke A, Storch A, Wittchen HU, Consortium L (2020) Longitudinal brain atrophy distribution in advanced Parkinson's disease: What makes the difference in "cognitive status" converters? *Human Brain Mapping* 41:1416-34

Gorner M, Ramezanpour H, Chong I, Thier P (2020) Does the brain encode the gaze of others as beams emitted by their eyes? *Proceedings of the National Academy of Sciences of the United States of America* 117:20375-76

Grimm AS, **Schubert C, Grimm A, Stahl JH**, Kupper H, Horber V, **Kegele J, Willikens S, Wittlinger J**, Serna-Higuita L, **Winter N**, Groeschel S (2020) Normative observational nerve ultrasound values in school-age children and adolescents and their application to hereditary neuropathies. *Frontiers in Neurology* 11:9

Guelfi S, D'Sa K, Botia JA, Vandrovcova J, Reynolds RH, Zhang D, Trabzuni D, Collado-Torres L, Thomason A, Leyton PQ, Taliun SAG, Nalls MA, Small KS, Smith C, Ramasamy A, Hardy J, Weale ME, Ryten M, International Parkinson's Disease Genomics Consortium (IPDGC) – **Schulte C, Brockmann K, Heutink P, Gasser T** et al, Ukbec (2020) Regulatory sites for splicing in human basal ganglia are enriched for disease-relevant information. *Nature Communications* 11:1041

Gugel I, Ebner FH, Grimm F, Czemmel S, Paulsen F, Hagel C, **Tatagiba M**, Nahnsen S, **Tabatabai G** (2020) Contribution of mTOR and PTEN to radioresistance in sporadic and NF2-associated vestibular Schwannomas: A microarray and pathway analysis. *Cancers* 12:177

Guven G, Bilgic B, Samanci B, Gurvit H, Hanagasi H, Donmez C, Aslan R, **Lohmann E**, Erginel-Unaltuna N (2020) Peripheral TREM2 mRNA levels in early and late-onset Alzheimer disease's patients. *Molecular Biology Reports* 47:5903-09

Guven G, Ozer E, Bilgic B, Hanagasi H, Gurvit H, **Lohmann E**, Erginel-Unaltuna N (2020) The association of serum clusterin levels and clusterin rs11136000 polymorphisms with Alzheimer disease in a Turkish cohort. *Neurological Sciences and Neurophysiology* 37:134-40

Habibzadeh P, Tabatabaei Z, Inaloo S, Nashatizadeh MM, **Synofzik M**, Ostovan VR, Faghihi MA (2020) Case report: Expanding the genetic and phenotypic spectrum of autosomal recessive spastic ataxia of charlevoix-saguenay. *Frontiers in Genetics* 11:585136

Haenig C, Atias N, Taylor AK, Mazza A, Schaefer MH, Russ J, Riechers SP, Jain S, Coughlin M, Fontaine JF, Freibaum BD, Brusendorf L, Zenkner M, Porras P, Stroedicke M, Schnoegl S, Arnsburg K, Boeddrich A, Pigazzini L, **Heutink P**, Taylor JP, Kirstein J, Andrade-Navarro MA, Sharan R, Wanker EE (2020) Interactome mapping provides a network of neurodegenerative disease proteins and uncovers widespread protein aggregation in affected brains. *Cell Reports* 32:25

Haeufle DFB, Siegel J, Hochstein S, Gussew A, Schmitt S, Siebert T, Rzanny R, Reichenbach JR, Stutzig N (2020) Energy expenditure of dynamic submaximal human plantarflexion movements: Model prediction and validation by in-vivo magnetic resonance spectroscopy. *Frontiers ind Bioengineering and Biotechnology* 8:622

Haeufle DFB, Stollenmaier K, Heinrich I, Schmitt S, Ghazi-Zahedi K (2020) Morphological computation increases from lower- to higher-level of biological motor control hierarchy. *Frontiers in Robotics and AI* 7:511265

Haeufle DFB, Wochner I, Holzmuller D, Driess D, Gunther M, Schmitt S (2020) Muscles reduce neuronal information load: Quantification of control effort in biological vs. robotic pointing and walking. *Frontiers in Robotics and AI* 7:77

Hafed ZM, Goffart L (2020) Gaze direction as equilibrium: More evidence from spatial and temporal aspects of small-saccade triggering in the rhesus macaque monkey. *Journal of Neurophysiology* 123:308-22

Hahn MA, Heib D, Schabus M, Hoedlmoser K, **Helfrich RF** (2020) Slow oscillation-spindle coupling predicts enhanced memory formation from childhood to adolescence. *Elife* 9:21

Hans F, **Glasebach H, Kahle PJ** (2020) Multiple distinct pathways lead to hyperubiquitylated insoluble TDP-43 protein independent of its translocation into stress granules. *Journal of Biological Chemistry* 295:673-89

Hartig F, Birschmann I, Peter A, Horber S, **Ebner M, Sonnleitner M, Spencer C, Bombach P, Stefanou MI**, Kuhn J, **Mengel A, Ziemann U, Poli S** (2020) Point-of-care testing of coagulation in patients treated with edoxaban. *Journal of Thrombosis and Thrombolysis* 50:632-39

Hartig F, Poli S, Ebner M, Birschmann I, Kuhn J, **Ziemann U**, Haring HU, Lehmann R, Peter A, Horber S (2020) Monitoring of low dabigatran concentrations: Diagnostic performance at clinically relevant decision thresholds. *Journal of Thrombosis and Thrombolysis* 49:457-67

Hatton SN, Huynh KH, Bonilha L, Abela E, Alhusaini S, Altmann A, Alvim MKM, Balachandra AR, Bartolini E, Bender B, Bernasconi N, Bernasconi A, Bernhardt B, Bargallo N, Caldairou B, Caligiuri ME, Carr SJA, Cavalleri GL, Cendes F, Concha L, Davoodi-bojd E, Desmond PM, Devinsky O, Doherty CP, Domin M, Duncan JS, **Focke NK**, Foley SF, Gambardella A, Gleichgerrcht E, Guerrini R, Hamandi K, Ishikawa A, Keller SS, Kochunov PV, **Kotikalapudi R**, Kreilkamp BAK, Kwan P, Labate A, Langner S, Lenge M, Liu M, Lui E, **Martin P**, Mascalchi M, Moreira JCV, Morita-Sherman ME, O'Brien TJ, Pardoe HR, Pariente JC, Ribeiro LF, Richardson MP, Rocha CS, Rodriguez-Cruces R, Rosenow F, Severino M, Sinclair B, Soltanian-Zadeh H, Striano P, Taylor PN, Thomas RH, Tortora D, Velakoulis D, Vezzani A, Vivash L, von Podewils F, Vos SB, Weber B, Winston GP, Yasuda CL, Zhu AH, Thompson PM, Whelan CD, Jahanshad N, Sisodiya SM, McDonald CR (2020) White matter abnormalities across different epilepsy syndromes in adults: An enigma-epilepsy study. *Brain* 143:2454-73

Hauser S, Schuster S, Heuten E, **Hoeflinger P**, Admard J, **Schelling Y**, Velic A, Macek B, Ossowski S, **Schoels L** (2020) Comparative transcriptional profiling of motor neuron disorder-associated genes in various human cell culture models. *Frontiers in Cell and Developmental Biology* 8:544043

Hayer SN, Liepelt I, Barro C, **Wilke C**, Kuhle J, Martus P, **Schoels L**, Schulz JB, Reetz K, Fedosov K, Didszun C, Klockgether T, Giordano I, Pandolfo M, Depondt C, Rai M, Boesch S, Nachbauer W, Eigentler A, Indelicato E, Giunti P, Parkinson M, Manso K, Thomas-Black G, Garcia-Moreno H, Solanky N, Abeti R, Polke J, Labrum R, Garrido RdRFJ, Mascias J, Velasco SS, Garcia SS, Mariotti C, Nanetti L, Castaldo A, Mongelli A, Fichera M, Klopstock T, Karin I, Stendel C, Radelfahr F, Durr A, Biet M, Charles P, Ewenczyk C, Just J, Koutsis G, Walsh R, Bertini E, Grp ES (2020) NfL and pNFH are increased in Friedreich's ataxia. *Journal of Neurology* 267:1420-30

Heinzel S, Aho VTE, **Suenkel U, von Thaler A-K, Schulte C, Deuschle C**, Paulin L, Hantunen S, **Brockmann K**, Eschweiler GW, Maetzler W, **Berg D**, Auvinen P, Scheperjans F (2020) Gut microbiome signatures of risk and prodromal markers of Parkinson disease. *Annals of Neurology* 88:320-31

Heitmann H, Haller B, Tiemann L, Muhlau M, Berthele A, Tolle TR, Salmen A, Ambrosius B, Bayas A, Asseyer S, Hartung HP, Heesen C, Stangel M, Wildemann B, Haars S, Groppa S, Luessi F, Kumpfel T, Nischwitz S, Meuth SG, Klotz L, Linker RA, Zettl UK, **Ziemann U**, Tumani H, Tackenberg B, Zipp F, Wiendl H, Gold R, Hemmer B, Ploner M, German Competence Network Multiple S (2020) Longitudinal prevalence and determinants of pain in multiple sclerosis: Results from the German National Multiple Sclerosis Cohort study. *Pain* 161:787-96

Heller C, Foiani MS, Moore K, Convery R, Bocchetta M, Neason M, Cash DM, Thomas D, Greaves CV, Woollacott IOC, Shafei R, Van Swieten JC, Moreno F, Sanchez-Valle R, Borroni B, Laforce R, Jr., Masellis M, Tartaglia MC, Graff C, Galimberti D, Rowe JB, Finger E, **Synofzik M**, Vandenberghe R, de Mendonca A, Tagliavini F, Santana I, Ducharme S, Butler CR, Gerhard A, Levin J, Danek A, Frisoni G, Sorbi S, Otto M, Heslegrave AJ, Zetterberg H, Rohrer JD, Genfi (2020) Plasma glial fibrillary acidic protein is raised in progranulin-associated frontotemporal dementia. *Journal of Neurology, Neurosurgery and Psychiatry* 91:263-70

Hengel H, Bosso-Lefevre C, Grady G, Szenker-Ravi E, Li H, Pierce S, Lebigot E, Tan T-T, Eio MY, Narayanan G, Utami KH, Yau M, Handal N, Deigendesch W, Keimer R, Marzouqa HM, Gunay-Aygun M, Muriello MJ, Verhelst H, (...), Klee EW, Barresi S, Tartaglia M, Mor-Shaked H, Maddirevula S, Begtrup A, Telegrafi A, Pfundt R, **Schuele R**, Ciruna B, Bonnard C, Pouladi MA, Stewart JC, Claridge-Chang A, Lefeber DJ, Alkuraya FS, Mathuru AS, Venkatesh B, Barycki JJ, Simpson MA, Jamuar SS, **Schoels L**, Reversade B (2020) Loss-of-function mutations in UDP-Glucose 6-Dehydrogenase cause recessive developmental epileptic encephalopathy. *Nature Communications* 11:595

Hengel H, Buchert R, Sturm M, Haack TB, **Schelling Y**, Mahajnah M, Sharkia R, Azem A, Balousha G, Ghanem Z, Falana M, Balousha O, Ayesh S, Keimer R, Deigendesch W, Zaidan J, Marzouqa H, Bauer P, Schoels L (2020) First-line exome sequencing in palestinian and israeli arabs with neurological disorders is efficient and facilitates disease gene discovery. *European Journal of Human Genetics* 28:1034-43

Herdick M, Dyrba M, Fritz HJ, Altenstein S, Ballarini T, Brosseron F, Buerger K, Can Cetindag A, Dechent P, Dobisch L, Duezel E, Ertl-Wagner B, Fliessbach K, Dawn Freiesleben S, Frommann I, Glanz W, Dylan Haynes J, Heneka MT, Janowitz D, Kilimann I, **Laske C**, Metzger CD, Munk MH, Peters O, Priller J, Roy N, Scheffler K, Schneider A, Spottke A, Jakob Spruth E, Tscheuschler M, Vukovich R, Wiltfang J, Jessen F, Teipel S, Grothe MJ (2020) Multimodal MRI analysis of basal forebrain structure and function across the Alzheimer's disease spectrum. *NeuroImage Clinical* 28:102495

Herrmann ML, Bruchner N, **Martin P**, Wildgruber D (2020) Psychosis associated to CASPR2 autoantibodies and ovarian teratoma: A case report. *Psychiatry Research* 285:2

Hertlein V, Flores-Romero H, Das KK, Fischer S, Heunemann M, Calleja-Felipe M, Knafo S, Hipp K, Harter K, **Fitzgerald JC**, Garcia-Saez AJ (2020) MERLIN: A novel BRET-based proximity biosensor for studying mitochondria-ER contact sites. *Life Science Alliance* 3:e201900600

Hertrich I, Dietrich S, **Ackermann H** (2020) The margins of the language network in the brain. *Frontiers in Communication* 5:519955

Heyne HO, Baez-Nieto D, Iqbal S, Palmer DS, Brunklaus A, May P, Johannesen KM, Lauxmann S, Lemke JR, Moller RS, Perez-Palma E, Scholl UI, Syrbe S, **Lerche H**, Lal D, Campbell AJ, Wang HR, Pan J, Daly MJ, Epi C (2020) Predicting functional effects of missense variants in voltage-gated sodium and calcium channels. *Science Translational Medicine* 12:16

Hirsch S, Roggia C, Biskup S, Bender B, **Gepfner-Tuma I**, Eckert F, Zips D, Malek NP, Wilhelm H, Renovanz M, **Tabatabai G** (2020) Depatux-M and temozolomide in advanced high-grade glioma. *Neuro-Oncology Advances* 2:vdaa063

Hopfner F, Mueller SH, Szymczak S, Junge O, Tittmann L, May S, Lohmann K, Grallert H, Lieb W, Strauch K, Mueller-Nurasyid M, Berger K, Schormair B, Winkelmann J, Mollenhauer B, Trenkwalder C, Maetzler W, Berg D, Kasten M, Klein C, Hoeglinger GU, **Gasser T**, Deuschl G, Franke A, Krawczak M, Dempfle A, Kuhlenbaeumer G (2020) Private variants in PRKN are associated with late-onset Parkinson's disease. *Parkinsonism & Related Disorders* 75:24-26

Hopfner F, Mueller SH, Szymczak S, Junge O, Tittmann L, May S, Lohmann K, Grallert H, Lieb W, Strauch K, Mueller-Nurasyid M, Berger K, Schormair B, Winkelmann J, Mollenhauer B, Trenkwalder C, Maetzler W, Berg D, Kasten M, Klein C, Hoeglinger GU, **Gasser T**, Deuschl G, Franke A, Krawczak M, Dempfle A, Kuhlenbaeumer G (2020) Rare variants in specific lysosomal genes are associated with Parkinson's disease. *Movement Disorders* 35:1245-48

Hosseinzadeh Z, **Hauser S**, Singh Y, Pelzl L, **Schuster S**, Sharma Y, **Hoeflinger P**, Zacharopoulou N, Stournaras C, Rathbun DL, Zrenner E, **Schoels L**, Lang F (2020) Decreased Na+/K+ ATPase expression and depolarized cell membrane in neurons differentiated from chorea-acanthocytosis patients. *Scientific Reports* 10:8391

Huber ME, **Chiovetto E, Giese M**, Sternad D (2020) Rigid soles improve balance in beam walking, but improvements do not persist with bare feet. *Scientific Reports* 10:7629

Hurth H, **Schlak D**, Ebner FH (2020) Microdialysis findings in a patient with new onset refractory non-convulsive status epilepticus. *Neurocritical Care* 32:889-93

Huss A, Otto M, Senel M, Ludolph AC, **Abdelhak A**, Tumani H (2020) A score based on NfL and glial markers may differentiate between relapsing-remitting and progressive MS course. *Frontiers in Neurology* 11:608

Hussain SJ, Hayward W, Fourcand F, **Zrenner C, Ziemann U**, Buch ER, Hayward MK, Cohen LG (2020) Phase-dependent transcranial magnetic stimulation of the lesioned hemisphere is accurate after stroke. *Brain Stimulation* 13:1354-57

Idrees S, **Baumann MP**, Franke F, Munch TA, **Hafed ZM** (2020) Perceptual saccadic suppression starts in the retina. *Nature Communications* 11:1977

Ilg W, Seemann J, Giese M, Traschutz A, Schols L, Timmann D, Synofzik M (2020) Real-life gait assessment in degenerative cerebellar ataxia: Toward ecologically valid biomarkers. *Neurology* 95:e1199-e210

Indelicato E, Nachbauer W, Eigentler A, Amprosi M, Gothe RM, Giunti P, Mariotti C, Arpa J, Durr A, Klopstock T, **Schoels L**, Giordano I, Buerk K, Pandolfo M, Didszdun C, Schulz JB, Boesch S, Ataxia EEF (2020) Onset features and time to diagnosis in Friedreich's ataxia. *Orphanet Journal of Rare Diseases* 15:198

Ito T, Brincat SL, **Siegel M**, Mill RD, He BJ, Miller EK, Rotstein HG, Cole MW (2020) Task-evoked activity quenches neural correlations and variability across cortical areas. *PLoS Computational Biology* 16:e1007983

Iwaki H, Blauwendraat C, Makarious MB, Bandres-Ciga S, Leonard HL, Gibbs JR, Hernandez DG, Scholz SW, Faghri F, Nalls MA, Singleton AB, International Parkinson's Disease Genomics Consortium (IPDGC) – **Schulte C, Brockmann K, Heutink P, Gasser T** et al (2020) Penetrance of Parkinson's disease in LRRK2 p.G2019S carriers is modified by a polygenic risk score. *Movement Disorders* 35:774-80

Jacobi H, du Montcel ST, Romanzetti S, Harmuth F, Mariotti C, Nanetti L, Rakowicz M, Makowicz G, Durr A, Monin M-L, Filla A, Roca A, **Schoels L, Hengel H**, Infante J, Kang J-S, Timmann D, Casali C, Masciullo M, Baliko L, Melegh B, Nachbauer W, Buerk-Gergs K, Schulz JB, Riess O, Reetz K, Klockgether T (2020) Conversion of individuals at risk for spinocerebellar ataxia types 1, 2, 3, and 6 to manifest ataxia (RISCA): A longitudinal cohort study. *Lancet Neurology* 19:738-47

Jung S, Moeller K, **Karnath HO**, Klein E (2020) Hemispheric lateralization of arithmetic facts and magnitude processing for two-digit numbers. *Frontiers in Human Neuroscience* 14:88

Kajal DS, Fioravanti C, **Elshahabi A**, Ruiz S, Sitaram R, **Braun C** (2020) Involvement of top-down networks in the perception of facial emotions: A magnetoencephalographic investigation. *Neuroimage* 222:117075

Kalbe E, Folkerts AK, Ophey A, Eggers C, Elben S, Dimenshteyn K, **Sulzer P, Schulte C**, Schmidt N, Schlenstedt C, Berg D, Witt K, Wojtecki L, **Liepelt-Scarfone I** (2020) Enhancement of executive functions but not memory by multidomain group cognitive training in patients with Parkinson's disease and mild cognitive impairment: A multicenter randomized controlled trial. *Parkinsons Disease* 2020:4068706

Karnath H-O, Zihl J, Benke T, Brötz D, Brinkmann S, Hildebrandt H, Kerkhoff G, Kiesewalter C, Müri R, Wallesch C-W, Wessel K (2020) Kurzfassung der S1-Leitlinie „Rehabilitation bei Störungen der Raumkognition" (AWMF-030/126). *Zeitschrift für Neuropsychologie* 31:129-34

Kemmerer CL, Pernpeintner V, **Ruschil C, Abdelhak A, Scholl M, Ziemann U, Krumbholz M**, Hemmer B, **Kowarik MC** (2020) Differential effects of disease modifying drugs on peripheral blood B cell subsets: A cross sectional study in multiple sclerosis patients treated with interferon-beta, glatiramer acetate, dimethyl fumarate, fingolimod or natalizumab. *PLoS One* 15:e0235449

Kermer P, Eschenfelder CC, Diener HC, Grond M, Abdalla Y, Abraham A, Althaus K, Becks G, Berrouschot J, Berthel J, Bode FJ, Burghaus L, Cangur H, Daffertshofer M, Edelbusch S, Eggers J, Gerlach R, Groschel K, Grosse-Dresselhaus F, Gunther A, Haase CG, Haensch CA, Harloff A, Heckmann JG, Held V, Hieber M, Kauert A, Kern R, Kerz T, Kohrmann M, Kraft P, Kuhnlein P, Latta J, Leinisch E, Lenz A, Leithner C, Neumann-Haefelin T, Maurer M, Mullges W, Nolte CH, Obermann M, Partowi S, Patzschke P, **Poli S**, Pulkowski U, Purrucker J, Rehfeldt T, Ringleb PA, Rother J, Rossi R, El-Sabassy H, Sauer O, Schackert G, Schafer N, Schellinger PD, Schneider A, Schuppner R, Schwab S, Schwarte O, Seitz RJ, Senger S, Shah YP, Sindern E, Sparenberg P, Steiner T, Szabo K, Urbanek C, Sarnowksi BV, Weissenborn K, Wienecke P, Witt K, Wruck R, Wunderlich S (2020) Antagonizing dabigatran by idarucizumab in cases of ischemic stroke or intracranial hemorrhage in Germany-Updated series of 120 cases. *International Journal of Stroke* 15:609-18

Khademi F, Chen CY, **Hafed ZM** (2020) Visual feature tuning of superior colliculus neural reafferent responses after fixational microsaccades. *Journal of Neurophysiology* 123:2136-53

Khazali MF, Ramezanpour H, Thier P (2020) V1 neurons encode the perceptual compensation of false torsion arising from listing's law. *Proceedings of the National Academy of Sciences of the United States of America* 117:18799-809

Klingbeil J, Wawrzyniak M, Stockert A, **Karnath HO**, Saur D (2020) Hippocampal diaschisis contributes to anosognosia for hemiplegia: Evidence from lesion network-symptom-mapping. *Neuroimage* 208:116485

Knipper M, van Dijk P, Schulze H, Mazurek B, Krauss P, Scheper V, Warnecke A, Schlee W, Schwabe K, Singer W, **Braun C**, Delano PH, Fallgatter AJ, Ehlis AC, Searchfield GD, Munk MHJ, Baguley DM, Ruttiger L (2020) The neural bases of tinnitus: Lessons from deafness and cochlear implants. *Journal of Neuroscience* 40:7190-202

Koch MS, Czemmel S, Lennartz F, Beyeler S, Rajaraman S, Przystal JM, Govindarajan P, Canjuga D, Neumann M, Rizzu P, Zwirner S, Hoetker MS, Zender L, **Walter B**, Tatagiba M, Raineteau O, Heutink P, Nahnsen S, **Tabatabai G** (2020) Experimental glioma with high bHLH expression harbor increased replicative stress and are sensitive toward ATR inhibition. *Neuro-Oncology Advances* 2:vdaa115

Kopczak A, Schindler A, Bayer-Karpinska A, Koch ML, Sepp D, Zeller J, Strecker C, Hempel JM, Yuan C, Malik R, Wollenweber FA, Boeckh-Behrens T, Cyran CC, Helck A, Harloff A, **Ziemann U, Poli S**, Poppert H, Dichgans M, Saam T (2020) Complicated carotid artery plaques as a cause of cryptogenic stroke. *Journal of the American College of Cardiology* 76:2212-22

Kraemer PM, Gorner M, Ramezanpour H, Dicke PW, Thier P (2020) Frontal, parietal, and temporal brain areas are differentially activated when disambiguating potential objects of joint attention. *eNeuro* 7

Kreuzer M, **Butovas S**, Garcia PS, Schneider G, **Schwarz C**, Rudolph U, Antkowiak B, Drexler B (2020) Propofol affects cortico-hippocampal interactions via Beta3 subunit-containing $GABA_A$ receptors. *International Journal of Molecular Sciences* 21:5844

Krieg SI, Kraegeloh-Mann I, Groeschel S, Beck-Woedl S, Husain RA, **Schoels L**, Kehrer C (2020) Natural history of Krabbe disease - a nationwide study in Germany using clinical and MRI data. *Orphanet Journal of Rare Diseases* 15:243

Kupper H, Kaiser N, **Winter N**, Kehrer C, Groeschel S, Bevot A, Nagele T, Krageloh-Mann I, **Grimm A** (2020) Enlargement of peripheral nerves in Krabbe disease: The diagnostic value of nerve ultrasound. *Muscle & Nerve* 61:E24-E27

Lal D, May P, Perez-Palma E, Samocha KE, Kosmicki JA, Robinson EB, Moller RS, Krause R, Nurnberg P, Weckhuysen S, De Jonghe P, Guerrini R, Niestroj LM, Du JL, Marini C, Ware JS, Kurki M, Gormley P, Tang S, Wu ST, Biskup S, Poduri A, Neubauer BA, Koeleman BPC, Helbig KL, **Weber YG**, Helbig I, Majithia AR, Palotie A, Daly MJ, Euro E-RESC (2020) Gene family information facilitates variant interpretation and identification of disease-associated genes in neurodevelopmental disorders. *Genome Medicine* 12:12

Lang J, Haas E, Hubener-Schmid J, Anderson CJ, Pulst SM, **Giese MA, Ilg W** (2020) Detecting and quantifying ataxia-related motor impairments in rodents using markerless motion tracking with deep neural networks. *Annual International Conference IEEE Engineering in Medicine and Biology Society* 2020:3642-48

Lariviere S, Rodriguez-Cruces R, Royer J, Caligiuri ME, Gambardella A, Concha L, Keller SS, Cendes F, Yasuda C, Bonilha L, Gleichgerrcht E, **Focke NK**, Domin M, von Podewills F, Langner S, Rummel C, Wiest R, **Martin P, Kotikalapudi R**, O'Brien TJ, Sinclair B, Vivash L, Desmond PM, Alhusaini S, Doherty CP, Cavalleri GL, Delanty N, Kalviainen R, Jackson GD, Kowalczyk M, Mascalchi M, Semmelroch M, Thomas RH, Soltanian-Zadeh H, Davoodi-Bojd E, Zhang JS, Lenge M, Guerrini R, Bartolini E, Hamandi K, Foley S, Weber B, Depondt C, Absil J, Carr SJA, Abela E, Richardson MP, Devinsky O, Severino M, Striano P, Tortora D, Hatton SN, Vos SB, Duncan JS, Whelan CD, Thompson PM, Sisodiya SM, Bernasconi A, Labate A, McDonald CR, Bernasconi N, Bernhardt BC (2020) Network-based atrophy modeling in the common epilepsies: A worldwide enigma study. *Science Advances* 6:13

Lauwers E, Lalli G, Brandner S, Collinge J, Compernolle V, Duyckaerts C, Edgren G, Haik S, Hardy J, Helmy A, Ivinson AJ, Jaunmuktane Z, **Jucker M**, Knight R, Lemmens R, Lin IC, Love S, Mead S, Perry VH, Pickett J, Poppy G, Radford SE, Rousseau F, Routledge C, Schiavo G, Schymkowitz J, Selkoe DJ, Smith C, Thal DR, Theys T, Tiberghien P, van den Burg P, Vandekerckhove P, Walton C, Zaaijer HL, Zetterberg H, De Strooper B (2020) Potential human transmission of amyloid beta pathology: Surveillance and risks. *Lancet Neurology* 19:872-78

Le Blanc G, Pomerleau VJ, McCarthy J, Borroni B, van Swieten J, Galimberti D, Sanchez-Valle R, LaForce R, Jr., Moreno F, **Synofzik M**, Graff C, Masellis M, Tartaglia MC, Rowe JB, Vandenberghe R, Finger E, Tagliavini F, de Mendonca A, Santana I, Butler C, Gerhard A, Danek A, Levin J, Otto M, Frisoni G, Sorbi S, Rohrer JD, Ducharme S, Genetic Frontotemporal Dementia I (2020) Faster cortical thinning and surface area loss in presymptomatic and symptomatic C9orf72 repeat expansion adult carriers. *Annals of Neurology* 88:113-22

Lefaucheur JP, Aleman A, Baeken C, Benninger DH, Brunelin J, Di Lazzaro V, Filipovic SR, Grefkes C, Hasan A, Hummel FC, Jaaskelainen SK, Langguth B, Leocani L, Londero A, Nardone R, Nguyen JP, Nyffeler T, Oliveira-Maia AJ, Oliviero A, Padberg F, Palm U, Paulus W, Poulet E, Quartarone A, Rachid F, Rektorova I, Rossi S, Sahlsten H, Schecklmann M, Szekely D, **Ziemann U** (2020) Evidence-based guidelines on the therapeutic use of repetitive transcranial magnetic stimulation (rTMS): An update (2014-2018). *Clinical Neurophysiology* 131:474-528

Lendner JD, **Helfrich RF**, Mander BA, Romundstad L, Lin JJ, Walker MP, Larsson PG, Knight RT (2020) An electrophysiological marker of arousal level in humans. *Elife* 9:29

Leonard H, Blauwendraat C, Krohn L, Faghri F, Iwaki H, Ferguson G, Day-Williams AG, Stone DJ, Singleton AB, Nalls MA, Gan-Or Z, International Parkinson's Disease Genomics Consortium (IPDGC) – **Schulte C, Brockmann K, Heutink P, Gasser T** et al (2020) Genetic variability and potential effects on clinical trial outcomes: Perspectives in Parkinson's disease. *Journal of Medical Genetics* 57:331-38

Lerche H, Knake S, Rosenow F, Schulze-Bonhage A, Hellot S, Leunikava I, Schulz A-L, Hopp P (2020) Brivaracetam substituting other antiepileptic treatments: Results of a retrospective study in German epilepsy centers. *Epilepsia open* 5:451-60

Lerche S, Wurster I, Roeben B, Zimmermann M, Machetanz G, Wiethoff S, Dehnert M, Rietschel L, Riebenbauer B, Deuschle C, Stransky E, **Lieplt-Scarfone I, Gasser T, Brockmann K** (2020) CSF NfL in a longitudinally assessed pd cohort: Age effects and cognitive trajectories. *Movement Disorders* 35:1138-44

Lerche S, Wurster I, Roeben B, Zimmermann M, Riebenbauer B, Deuschle C, Hauser A-K, Schulte C, Berg D, Maetzler W, Waniek K, Lachmann I, **Liepelt-Scarfone I, Gasser T, Brockmann K** (2020) Parkinson's disease: Glucocerebrosidase 1 mutation severity is associated with CSF alpha-synuclein profiles. *Movement Disorders* 35:495-99

Lesage S, Houot M, Mangone G, Tesson C, Bertrand H, Forlani S, Anheim M, Brefel-Courbon C, Broussolle E, Thobois S, Damier P, Durif F, Roze E, Tison F, Grabli D, Ory-Magne F, Degos B, Viallet F, Cormier-Dequaire F, Ouvrard-Hernandez A-M, Vidailhet M, **Lohmann E**, Singleton A, Corvol J-C, Brice A, French Parkinson Dis Genetics S (2020) Genetic and phenotypic basis of autosomal dominant Parkinson's disease in a large multi-center cohort. *Frontiers in Neurology* 11:682

Lesage S, Lunati A, Houot M, Ben Romdhan S, Clot F, Tesson C, Mangone G, Le Toullec B, Courtin T, Larcher K, Benmahdjoub M, Arezki M, Bouhouche A, Anheim M, Roze E, Viallet F, Tison F, Broussolle E, Emre M, Hanagasi H, Bilgic B, Tazir M, Ben Djebara M, Gouider R, Tranchant C, Vidailhet M, Le Guern E, Corti O, Mhiri C, **Lohmann E**, Singleton A, Corvol J-C, Brice A, French Parkinson Dis Genetics S (2020) Characterization of recessive Parkinson disease in a large multicenter study. *Annals of Neurology* 88:843-50

Luo J, Agboola F, Grant E, Masters CL, Albert MS, Johnson SC, McDade EM, Voglein J, Fagan AM, Benzinger T, Massoumzadeh P, Hassenstab J, Bateman RJ, Morris JC, Perrin RJ, Chhatwal J, **Jucker M**, Ghetti B, Cruchaga C, Graff-Radford NR, Schofield PR, Mori H, Xiong C (2020) Sequence of Alzheimer disease biomarker changes in cognitively normal adults: A cross-sectional study. *Neurology* 95:e3104-e16

Mac Grory B, Nackenoff A, **Poli S**, Spitzer MS, Nedelmann M, Guillon B, Preterre C, Chen CS, Lee AW, Yaghi S, Stretz C, Azher I, Paddock J, Bakaeva T, Greer DM, Shulman JG, Kowalski RG, Lavin P, Mistry E, Espaillat K, Furie K, Kirshner H, Schrag M (2020) Intravenous fibrinolysis for central retinal artery occlusion: A cohort study and updated patient-level meta-analysis. *Stroke* 51:2018-25

Mack DJ, Heinzel S, Pilotto A, Stetz L, Lachenmaier S, Gugolz L, Srulijes K, Eschweiler GW, **Suenkel U, Berg D, Ilg UJ** (2020) The effect of age and gender on anti-saccade performance: Results from a large cohort of healthy aging individuals. *European Journal of Neuroscience* 52:4165-84

Maier F, Spottke A, Bach JP, Bartels C, Buerger K, Dodel R, Fellgiebel A, Fliessbach K, Frolich L, Hausner L, Hellmich M, Kloppel S, Klostermann A, Kornhuber J, **Laske C**, Peters O, Priller J, Richter-Schmidinger T, Schneider A, Shah-Hosseini K, Teipel S, von Arnim CAF, Wiltfang J, Jessen F (2020) Bupropion for the treatment of apathy in Alzheimer disease: A randomized clinical trial. *JAMA Network Open* 3:e206027

Malekshahi A, Malekshahi R, Czornik M, Dax J, Wolpert S, Bauer H, **Braun C**, Birbaumer N (2020) Real-time monitoring and regulating auditory cortex alpha activity in patients with chronic tinnitus. *Journal of Neural Engineering* 17:016032

Malevich T, Buonocore A, Hafed ZM (2020) Rapid stimulus-driven modulation of slow ocular position drifts. *Elife* 9:e57595

Markanday A, Bellet J, Bellet ME, **Inoue J, Hafed ZM, Thier P** (2020) Using deep neural networks to detect complex spikes of cerebellar Purkinje cells. *Journal of Neurophysiology* 123:2217-34

Marquetand J, Freisinger P, Lindig T, Euler S, Gasser M, Overkamp D (2020) Ammonia and coma - a case report of late onset hemizygous ornithine carbamyltransferase deficiency in 68-year-old female. *BMC Neurology* 20:5

Mayer AK, Balousha G, Sharkia R, Mahajnah M, Ayesh S, Schulze M, Buchert R, Zobor D, Azem A, **Schoels L**, Bauer P, Wissinger B (2020) Unraveling the genetic cause of hereditary ophthalmic disorders in Arab societies from Israel and the Palestinian authority. *European Journal of Human Genetics* 28:742-53

Mengel A, Stefanou MI, Hadaschik KA, Wolf M, Stadler V, Poli K, Lindig T, Ernemann U, Grimm F, Tatagiba M, **Ziemann U, Poli S** (2020) Early administration of desmopressin and platelet transfusion for reducing hematoma expansion in patients with acute antiplatelet therapy associated intracerebral hemorrhage. *Critical Care Medicine* 48:1009-17

Mengel A, Ziemann U (2020) Prophylaxe und Therapie des artherothrombotischen Schlaganfalls. *Klinikarzt* 49:62-67

Mengel D, Janelidze S, Glynn RJ, Liu W, Hansson O, Walsh DM (2020) Plasma NT1 tau is a specific and early marker of Alzheimer's disease. *Annals of Neurology* 88:878-92

Mengel D, Liu W, Glynn RJ, Selkoe DJ, Strydom A, Lai F, Rosas HD, Torres A, Patsiogiannis V, Skotko B, Walsh DM (2020) Dynamics of plasma biomarkers in down syndrome: The relative levels of abeta42 decrease with age, whereas NT1 tau and NfL increase. *Alzheimer's Research & Therapy* 12:27

Merola A, Romagnolo A, Dwivedi AK, Padovani A, **Berg D**, Garcia-Ruiz PJ, Fabbri M, Artusi CA, Zibetti M, Lopiano L, Pilotto A, Bonacina S, Morgante F, Zeuner K, Griewing C, Schaeffer E, Rodriguez-Porcel F, Kauffman M, Turcano P, de Oliveira LM, Palermo G, Shanks E, Del Sorbo F, Bonvegna S, Savica R, Munhoz RP, Ceravolo R, Cilia R, Espay AJ (2020) Benign versus malignant Parkinson disease: The unexpected silver lining of motor complications. *Journal of Neurology* 267:2949-60

Milosevic L, Scherer M, **Cebi I**, Guggenberger R, Machetanz K, Naros G, **Weiss D**, Gharabaghi A (2020) Online mapping with the deep brain stimulation lead: A novel targeting tool in Parkinson's disease. *Movement Disorders* 35:1574-86

Mo A, **Izzi F, Haeufle DFB**, Badri-Sprowitz A (2020) Effective viscous damping enables morphological computation in legged locomotion. *Frontiers in Robotics and AI* 7:110

Moore KM, Nicholas J, Grossman M, McMillan CT, Irwin DJ, Massimo L, Van Deerlin VM, Warren JD, Fox NC, Rossor MN, Mead S, Bocchetta M, Boeve BF, Knopman DS, Graff-Radford NR, Forsberg LK, Rademakers R, Wszolek ZK, van Swieten JC, Jiskoot LC, Meeter LH, Dopper EGP, Papma JM, Snowden JS, Saxon J, Jones M, Pickering-Brown S, Le Ber I, Camuzat A, Brice A, Caroppo P, Ghidoni R, Pievani M, Benussi L, Binetti G, Dickerson BC, Lucente D, Krivensky S, Graff C, Oijerstedt L, Fallstrom M, Thonberg H, Ghoshal N, Morris JC, Borroni B, Benussi A, Padovani A, Galimberti D, Scarpini E, Fumagalli GG, Mackenzie IR, Hsiung G-YR, Sengdy P, Boxer AL, Rosen H, Taylor JB, **Synofzik M, Wilke C, Sulzer P**, Hodges JR, Halliday G, Kwok J, Sanchez-Valle R, Llado A, Borrego-Ecija S, Santana I, Almeida MR, Tabuas-Pereira M, Moreno F, Barandiaran M, Indakoetxea B, Levin J, Danek A, Rowe JB, Cope TE, Otto M, Anderl-Straub S, de Mendonca A, Maruta C, Masellis M, Black SE, Couratier P, Lautrette G, Huey ED, (...) Mesulam MM, Bigio E, Koros C, Papatriantafyllou J, Kroupis C, Stefanis L, Shoesmith C, Roberson E, Coppola G, Ramos EMDS, Geschwind D, Initiative FTDP (2020) Age at symptom onset and death and disease duration in genetic frontotemporal dementia: An international retrospective cohort study. *Lancet Neurology* 19:145-56

Moscovich M, Heinzel S, Postuma RB, **Reilmann R**, Klockgether T, Jacobi H, Hoglinger G, Berg D (2020) How specific are non-motor symptoms in the prodrome of Parkinson's disease compared to other movement disorders? *Parkinsonism & Related Disorders* 81:213-18

Moya-Diaz J, Bayones L, Montenegro M, Cardenas AM, **Koch H**, Doi A, Marengo FD (2020) Ca2+-independent and voltage-dependent exocytosis in mouse chromaffin cells. *Acta Physiologica* 228:19

Müller R, Vielemeyer J, **Häufle DFB** (2020) Negotiating ground level perturbations in walking: Visual perception and expectation of curb height modulate muscle activity. *Journal of Biomechanics* 113:110121

Nagel M, MuSsig S, Hoflinger P, **Schols L**, Hauser S, **Schule R** (2020) Generation of the CRISPR/Cas9-mediated KIF1C knock-out human iPSC line HIHRSi003-A-1. *Stem Cell Research* 49:102059

Naros G, Lehnertz T, Leao MT, **Ziemann U**, Gharabaghi A (2020) Brain state-dependent gain modulation of corticospinal output in the active motor system. *Cerebral Cortex* 30:371-81

Nestmann S, Karnath HO, Bulthoff HH, Nikolas de Winkel K (2020) Changes in the perception of upright body orientation with age. *PLoS One* 15:e0233160

Neumann MA-C, Grossmann D, Schimpf-Linzenbold S, Dayan D, Stingl K, Ben-Menachem R, Pines O, Massart F, Delcambre S, Ghelfi J, Bohler J, Strom T, Kessel A, Azem A, **Schoels L**, Gruenewald A, Wissinger B, Krueger R (2020) Haploinsufficiency due to a novel ACO2 deletion causes mitochondrial dysfunction in fibroblasts from a patient with dominant optic nerve atrophy. *Scientific Reports* 10:16736

Niestroj LM, Perez-Palma E, Howrigan DP, Zhou YD, Cheng FX, Saarentaus E, Nurnberg P, Stevelink R, Daly MJ, Palotie A, Lal D, Epi25 Collaborative – **Lerche H** et al (2020) Epilepsy subtype-specific copy number burden observed in a genome-wide study of 17458 subjects. *Brain* 143:2106-18

Niller HH, Angstwurm K, Rubbenstroth D, Schlottau K, Ebinger A, Giese S, Wunderlich S, Banas B, Forth LF, Hoffmann D, Hoper D, Schwemmle M, Tappe D, Schmidt-Chanasit J, Nobach D, Herden C, Brochhausen C, Velez-Char N, Mamilos A, Utpatel K, Evert M, Zoubaa S, Riemenschneider MJ, Ruf V, Herms J, Rieder G, Errath M, Matiasek K, Schlegel J, Liesche-Starnecker F, Neumann B, Fuchs K, Linker RA, Salzberger B, **Freilinger T**, Gartner L, Wenzel JJ, Reischl U, Jilg W, Gessner A, Jantsch J, Beer M, Schmidt B (2020) Zoonotic spillover infections with borna disease virus 1 leading to fatal human encephalitis, 1999-2019: An epidemiological investigation. *Lancet Infectious Diseases* 20:467-77

Ochakovski GA, Wenzel DA, Spitzer MS, **Poli S, Hartig F**, Fischer MD, Dimopoulos S, Schultheiss M (2020) Retinal oedema in central retinal artery occlusion develops as a function of time. *Acta Ophthalmologica* 98:e680-e84

Opie GM, Pourmajidian M, **Ziemann U**, Semmler JG (2020) Investigating the influence of paired-associative stimulation on multi-session skill acquisition and retention in older adults. *Clinical Neurophysiology* 131:1497-507

Panagiotakopoulou V, Ivanyuk D, De Cicco S, Haq W, Arsic A, Yu C, **Messelodi D, Oldrati M, Schoendorf DC, Perez M-J, Cassatella RP**, Jakobi M, Schneiderhan-Marra N, **Gasser T**, Nikic-Spiegel I, **Deleidi M** (2020) Interferon-gamma signaling synergizes with LRRK2 in neurons and microglia derived from human induced pluripotent stem cells. *Nature Communications* 11:5163

Park J, Flores BR, Scherer K, Kuepper H, Rossi M, Rupprich K, Rautenberg M, Deininger N, Weichselbaum A, **Grimm A**, Sturm M, Grasshoff U, Delpire E, Haack TB (2020) *De novo* variants in *SLC12A6* cause sporadic early-onset progressive sensorimotor neuropathy. *Journal of Medical Genetics* 57:283-88

Pedroarena CM (2020) A slow short-term depression at purkinje to deep cerebellar nuclear neuron synapses supports gain-control and linear encoding over second-long time windows. *Journal of Neuroscience* 40:5937-53

Pfeiffer F, **Benali A** (2020) Could non-invasive brain-stimulation prevent neuronal degeneration upon ion channel re-distribution and ion accumulation after demyelination? *Neural Regeneration Research* 15:1977-80

Pflug C, Nienstedt JC, Gulberti A, Mueller F, Vettorazzi E, Koseki JC, Niessen A, Fluegel T, Hidding U, Buhmann C, **Weiss D**, Gerloff C, Hamel W, Moll CKE, Poetter-Nerger M (2020) Impact of simultaneous subthalamic and nigral stimulation on dysphagia in Parkinson's disease. *Annals of Clinical and Translational Neurology* 7:628-38

Pilacinski A, Holler-Wallscheid MS, **Lindner A** (2020) Remember how to use it: Effector-dependent modulation of spatial working memory activity in posterior parietal cortex. *PLoS One* 15:e0238022

Piot I, Schweyer K, Respondek G, Stamelou M, **Gasser T**, Hermann A, Hoeglinger G, Hoellerhage M, Kimmich O, Klockgether T, Levin J, Machetanz G, Osterrath A, Palleis C, Prudlo J, Spottke A, Berg D, Buerk K, Classen J, Eggers C, Greuel A, Grimm M-J, Hermann L, Iankova V, Jahn K, Jost W, Klietz M, Kuehn A, Marxreiter F, Paschen S, Poetter-Nerger M, Preisl M-T, Prilop L, Toenges L, Trenkwalder C, Warnecke T, Wegner F, Winkler J, Antonini A, Bhatia KP, Boxer AL, Colosimo C, Compta Y, Corvol J-C, Golbe LI, Hoglinger GU, Lang AE, Litvan I, Morris HR, Nilsson C, Pantelyat A, Respondek G, Stamelou M, Sckopke P, Schenk T, Goetz CG, Stebbins GT, Describe PSPSG, Pro PSPSG, Grp MD-EPS (2020) The progressive supranuclear palsy clinical deficits scale. *Movement Disorders* 35:650-61

Pomper JK, Spadacenta S, Bunjes F, Arnstein D, Giese MA, Thier P (2020) Representation of the observer's predicted outcome value in mirror and nonmirror neurons of macaque F5 ventral premotor cortex. *Journal of Neurophysiology* 124:941-61

Rademacher A, **Schwarz N, Seiffert S**, Pendziwiat M, Rohr A, van Baalen A, Helbig I, **Weber Y**, Muhle H (2020) Whole-exome sequencing in NF1-related west syndrome leads to the identification of KCNC2 as a novel candidate gene for epilepsy. *Neuropediatrics* 51:368-72

Rajan R, Divya KP, Kandadai RM, Yadav R, Satagopam VP, Madhusoodanan UK, Agarwal P, Kumar N, Ferreira T, Kumar H, Prasad AVS, Shetty K, Mehta S, Desai S, Kumar S, Prashanth LK, Bhatt M, Wadia P, Ramalingam S, Wali GM, Pandey S, Bartusch F, Hannussek M, Krueger J, Kumar-Sreelatha A, Grover S, Lichtner P, Sturm M, Roeper J, Busskamp V, Chandak GR, Schwamborn J, Seth P, **Gasser T**, Riess O, Goyal V, Pal PK, Borgohain R, Krueger R, Kishore A, Sharma M, Lux GC (2020) Genetic architecture of Parkinson's disease in the indian population: Harnessing genetic diversity to address critical gaps in Parkinson's disease research. *Frontiers in Neurology* 11:524

Rajewsky N, Almouzni G, Gorski SA, Aerts S, Amit I, Bertero MG, Bock C, Bredenoord AL, Cavalli G, Chiocca S, Clevers H, De Strooper B, Eggert A, Ellenberg J, Fernandez XM, Figlerowicz M, Gasser SM, Hubner N, Kjems J, Knoblich JA, Krabbe G, Lichter P, Linnarsson S, Marine J-C, Marioni JC, Marti-Renom MA, Netea MG, Nickel D, Nollmann M, Novak HR, Parkinson H, Piccolo S, Pinheiro I, Pombo A, Popp C, Reik W, Roman-Roman S, Rosenstiel P, Schultze JL, Stegle O, Tanay A, Testa G, Thanos D, Theis FJ, Torres-Padilla M-E, Valencia A, Vallot C, van Oudenaarden A, Vidal M, Voet T, LifeTime Community Working Groups – **Gasser T, Synofzik M** et al (2020) Lifetime and improving european healthcare through cell-based interceptive medicine. *Nature* 587:377-86

Ramezanpour H, Thier P (2020) Decoding of the other's focus of attention by a temporal cortex module. *Proceedings of the National Academy of Sciences of the United States of America* 117:2663-70

Rattay TW, Boldt A, Voelker M, Wiethoff S, Hengel H, Schuele R, Schoels L (2020) Non-motor symptoms are relevant and possibly treatable in hereditary spastic paraplegia type 4 (SPG4). *Journal of Neurology* 267:369-79

Rattay TW, Rautenberg M, Soehn AS, **Hengel H, Traschuetz A, Roeben B, Hayer SN, Schuele R, Wiethoff S, Zeltner L**, Haack TB, Cegan A, **Schoels L**, Schleicher E, Peter A (2020) Defining diagnostic cutoffs in neurological patients for serum very long chain fatty acids (VLCFA) in genetically confirmed X-Adrenoleukodystrophy. *Scientific Reports* 10:15093

Rauer S, Hoshi MM, Pul R, Wahl M, Schwab M, Haas J, Ellrichmann G, **Krumbholz M**, Tackenberg B, Saum KU, Buck F, Leemhuis J, Kretschmann A, Aktas O (2020) Ocrelizumab treatment in patients with primary progressive multiple sclerosis: Short-term safety results from a compassionate use programme in Germany. *Clin Neurol Neurosurg* 197:106142

Rauscher M, Yavari F, Batsikadze G, **Ludolph N, Ilg W**, Nitsche MA, Timmann D, Steiner KM (2020) Lack of cerebellar tdcs effects on learning of a complex whole body dynamic balance task in middle-aged (50-65 years) adults. *Neurol Res Pract* 2:38

Renovanz M, Hippler M, Voss M, Wehinger J, Keßler AF, Gempt J, Nadji-Ohl M, Weiß Lucas C, Rapp M, Misch M, Coburger J, Mehlitz M, Meixensberger J, Keric N, **Tabatabai G**, Blettner M, Schranz M, Singer S (2020) Glioma patients in outpatient care-optimization of psychosocial care in neuro-oncological patients (GLIOPT): Protocol for a cluster randomized controlled trial. *Trials* 21:434

Ringelstein M, Harmel J, Zimmermann H, Brandt AU, Paul F, Haarmann A, Buttmann M, Hummert MW, Trebst C, Schroeder C, Ayzenberg I, Kleiter I, Hellwig K, Havla J, Kumpfel T, Jarius S, Wildemann B, Rommer P, Weber MS, Pellkofer H, Ropke L, Geis C, Retzlaff N, Zettl U, Deppe M, Klotz L, Young K, Stellmann JP, Kaste M, Kermer P, Marouf W, Lauda F, Tumani H, Graf J, Klistorner A, Hartung HP, Aktas O, Albrecht P, Neuromyelitis Optica Study Group – **Bischof F, Kowarik M, Krumbholz M, Melms A, Ruschil C, Tünnerhoff J, Zeltner L, Ziemann U** et al (2020) Longitudinal optic neuritis-unrelated visual evoked potential changes in nmo spectrum disorders. *Neurology* 94:e407-e18

Rockenfeller R, Gunther M, Stutzig N, **Haeufle DFB**, Siebert T, Schmitt S, Leichsenring K, Bol M, Gotz T (2020) Exhaustion of skeletal muscle fibers within seconds: Incorporating phosphate kinetics into a hill-type model. *Frontiers in Physiology* 11:306

Roeben B, Just J, Hengel H, Bender F, Poeschl P, **Synofzik M, Schoels L, Grimm A** (2020) Multifocal, hypoechogenic nerve thickening in cerebrotendinous xanthomatosis. *Clinical Neurophysiology* 131:1798-803

Rogasch NC, **Zipser C, Darmani G**, Mutanen TP, Biabani M, **Zrenner C, Desideri D, Belardinelli P, Muller-Dahlhaus F, Ziemann U** (2020) The effects of NMDA receptor blockade on TMS-evoked EEG potentials from prefrontal and parietal cortex. *Scientific Reports* 10:3168

Roncoroni LP, Weiss D, Sturm J, Hieber L, Bortlein A, Mayr I, Appy M, Kuhnler B, Buchthal J, Dippon C, Arnold G, **Wachter T** (2020) Health-related quality of life outcomes from botulinum toxin treatment in spasticity. *Toxins* 12:9

Rosa F, Dhingra A, **Uysal B**, Mendis GDC, **Loeffler H, Elsen G, Mueller S, Schwarz N**, Castillo-Lizardo M, Cuddy C, **Becker F, Heutink P**, Reid CA, Petrou S, **Lerche H, Maljevic S** (2020) In vitro differentiated human stem cell-derived neurons reproduce synaptic synchronicity arising during neurodevelopment. *Stem Cell Reports* 15:22-37

Rosa F, Grimm A, Ambjoernsen K, **Pomper JK** (2020) A gaze-triggered downbeat nystagmus persisting in primary position in a patient with hypomagnesemia combined with anti-SOX1. *Journal of the Neurological Sciences* 412:3

Roux T, Barbier M, Papin M, Davoine CS, Sayah S, Coarelli G, Charles P, Marelli C, Parodi L, Tranchant C, Goizet C, Klebe S, **Lohmann E**, Van Maldergen L, van Broeckhoven C, Coutelier M, Tesson C, Stevanin G, Duyckaerts C, Brice A, Durr A, Network S (2020) Clinical, neuropathological, and genetic characterization of STUB1 variants in cerebellar ataxias: A frequent cause of predominant cognitive impairment. *Genetics in Medicine* 22:1851-62

Ruiz-Gonzalez Y, Velazquez-Perez L, Rodriguez-Labrada R, Torres-Vega R, **Ziemann U** (2020) EMG rectification is detrimental for identifying abnormalities in corticomuscular and intermuscular coherence in spinocerebellar ataxia type 2. *Cerebellum* 19:665-71

Ruschil C, Gabernet G, Lepennetier G, Heumos S, Kaminski M, Hracsko Z, Irmler M, Beckers J, **Ziemann U**, Nahnsen S, Owens GP, Bennett JL, Hemmer B, **Kowarik MC** (2020) Specific induction of double negative B cells during protective and pathogenic immune responses. *Frontiers in Immunology* 11:606338

Russell LL, Greaves CV, Bocchetta M, Nicholas J, Convery RS, Moore K, Cash DM, van Swieten J, Jiskoot L, Moreno F, Sanchez-Valle R, Borroni B, Laforce R, Jr., Masellis M, Tartaglia MC, Graff C, Rotondo E, Galimberti D, Rowe JB, Finger E, **Synofzik M**, Vandenberghe R, de Mendonca A, Tagliavini F, Santana I, Ducharme S, Butler C, Gerhard A, Levin J, Danek A, Otto M, Warren JD, Rohrer JD, Genetic FTDI, Genfi (2020) Social cognition impairment in genetic frontotemporal dementia within the GENFI cohort. *Cortex* 133:384-98

Sailani MR, Jahanbani F, Abbott CW, Lee H, Zia A, Rego S, Winkelmann J, Hopfner F, Khan TN, Katsanis N, Mueller SH, **Berg D**, Lyman KM, Mychajliw C, Deuschl G, Bernstein JA, Kuhlenbaeumer G, Snyder MP (2020) Candidate variants intubare associated with familial tremor. *PLoS Genetics* 16:e1009010

San Luciano M, Tanner CM, Meng C, Marras C, Goldman SM, Lang AE, Tolosa E, Schule B, Langston JW, Brice A, Corvol JC, Goldwurm S, Klein C, Brockman S, **Berg D, Brockmann K**, Ferreira JJ, Tazir M, Mellick GD, Sue CM, Hasegawa K, Tan EK, Bressman S, Saunders-Pullman R, Michael JFFLC (2020) Nonsteroidalanti-inflammatory use and LRRK2 Parkinson's disease penetrance. *Movement Disorders* 35:1755-64

Sannemann L, Schild AK, Altenstein S, Bartels C, Brosseron F, Buerger K, Cosma NC, Fliessbach K, Freiesleben SD, Glanz W, Heneka MT, Janowitz D, Kilimann I, Kobeleva X, **Laske C**, Metzger CD, Munk MHJ, Perneczky R, Peters O, Polcher A, Priller J, Rauchmann B, Rosch C, Rudolph J, Schneider A, Spottke A, Spruth EJ, Teipel S, Vukovich R, Wagner M, Wiltfang J, Wolfsgruber S, Duezel E, Jessen F, Group DS (2020) Neuropsychiatric symptoms in at-risk groups for AD dementia and their association with worry and AD biomarkers – Results from the Delcode study. *Alzheimer's Research & Therapy* 12:131

Schaeffer E, Rogge A, Nieding K, Helmker V, Letsch C, Hauptmann B, **Berg D** (2020) Patients' views on the ethical challenges of early Parkinson disease detection. *Neurology* 94:E2037-E44

Scherer M, Milosevic L, Guggenberger R, Maus V, Naros G, Grimm F, Bucurenciu I, Steinhoff BJ, **Weber YG, Lerche H, Weiss D**, Rona S, Gharabaghi A (2020) Desynchronization of temporal lobe theta-band activity during effective anterior thalamus deep brain stimulation in epilepsy. *Neuroimage* 218:11

Schijven D, Stevelink R, McCormack M, van Rheenen W, Luykx JJ, Koeleman BPC, Veldink JH, Project Min EALSGC, International League Against Epilepsy Consortium on Complex E – **Lerche H** et al (2020) Analysis of shared common genetic risk between amyotrophic lateral sclerosis and epilepsy. *Neurobiology of Aging* 92:153.e1-53.e5

Schittenhelm J, Ziegler L, Sperveslage J, Mittelbronn M, Capper D, **Burghardt I**, Poso A, Biskup S, Skardelly M, **Tabatabai G** (2020) FGFR3 overexpression is a useful detection tool for FGFR3 fusions and sequence variations in glioma. *Neuro-Oncology Practice* 8:209-21

Scholten M, Schoellmann A, Ramos-Murguialday A, Lopez-Larraz E, Gharabaghi A, **Weiss D** (2020) Transitions between repetitive tapping and upper limb freezing show impaired movement-related beta band modulation. *Clinical Neurophysiology* 131:2499-507

Schreiber S, Schreiber F, Peter A, Isler E, Dorner M, Heinze HJ, Petri S, Tempelmann C, Nestor PJ, **Grimm A**, Vielhaber S (2020) 7T MR neurography-ultrasound fusion for peripheral nerve imaging. *Muscle & Nerve* 61:521-26

Schubert C, Grimm AS, **Stahl JH**, Kupper H, **Kegele J, Wittlinger J**, Serna-Higuita L, **Winter N**, Groeschel S, **Grimm A** (2020) Nerve ultrasound reference data in children from two to seven years. *Clinical Neurophysiology* 131:859-65

Schultz SA, Strain JF, Adedokun A, Wang Q, **Preische O**, Kuhle J, Flores S, Keefe S, Dincer A, Ances BM, Berman SB, Brickman AM, Cash DM, Chhatwal J, Cruchaga C, Ewers M, Fox NN, Ghetti B, Goate A, Graff-Radford NR, Hassenstab JJ, Hornbeck R, Jack C, Jr., Johnson K, Joseph-Mathurin N, Karch CM, Koeppe RA, Lee AKW, Levin J, Masters C, McDade E, Perrin RJ, Rowe CC, Salloway S, Saykin AJ, Sperling R, Su Y, Villemagne VL, Voglein J, Weiner M, Xiong C, Fagan AM, Morris JC, Bateman RJ, Benzinger TLS, **Jucker M**, Gordon BA, Dominantly Inherited Alzheimer N (2020) Serum neurofilament light chain levels are associated with white matter integrity in autosomal dominant Alzheimer's disease. *Neurobiology of Disease* 142:104960

Schuster S, Heuten E, Velic A, Admard J, **Synofzik M**, Ossowski S, Macek B, **Hauser S, Schoels L** (2020) CHIP mutations affect the heat shock response differently in human fibroblasts and iPSC-derived neurons. *Disease Models & Mechanisms* 13:dmm045096

Seitz IP, **Kowarik MC, Sartor-Pfeiffer J, Ziemann U**, Wilhelm H, Bartz-Schmidt KU (2020) Occurrence of primary progressive multiple sclerosis in a patient with argyria: Causality or coincidence? *Multiple Sclerosis and Related Disorders* 46:102465

Senderek J, Lassuthova P, Kabzinska D, Abreu L, Baets J, Beetz C, Braathen GJ, Brenner D, Dalton J, Dankwa L, Deconinck T, De Jonghe P, Drager B, Eggermann K, Ellis M, Fischer C, Stojkovic T, Herrmann DN, Horvath R, Hoyer H, Iglseder S, Kennerson M, Kinslechner K, Kohler JN, Kurth I, Laing NG, Lamont PJ, Wolfgang NL, Ludolph A, Marques W, Jr., Nicholson G, Ong R, Petri S, Ravenscroft G, Rebelo A, Ricci G, Rudnik-Schoneborn S, Schirmacher A, Schlotter-Weigel B, **Schoels L, Schule R, Synofzik M**, Francou B, Strom TM, Wagner J, Walk D, Wanschitz J, Weinmann D, Weishaupt J, Wiessner M, Windhager R, Young P, Zuchner S, Toegel S, Seeman P, Kochanski A, Auer-Grumbach M (2020) The genetic landscape of axonal neuropathies in the middle-aged and elderly: Focus on MME. *Neurology* 95:e3163-e79

Siebert R, Taubert N, Spadacenta S, Dicke PW, Giese MA, Thier P (2020) A naturalistic dynamic monkey head avatar elicits species-typical reactions and overcomes the uncanny valley. *eNeuro* 7:ENEURO.0524-19.2020

Siems M, Siegel M (2020) Dissociated neuronal phase- and amplitude-coupling patterns in the human brain. *Neuroimage* 209:116538

Simmons Z, **Ziemann U** (2020) Terminology in neuromuscular electrodiagnostic medicine and ultrasound: Time for an update. *Clinical Neurophysiology* 131:1655

Simmons Z, **Ziemann U** (2020) Terminology in neuromuscular electrodiagnostic medicine and ultrasound: Time for an update. *Muscle Nerve* 62:1

Simuni T, Brumm MC, Uribe L, Caspell-Garcia C, Coffey CS, Siderowf A, Alcalay R, Trojanowski JQ, Shaw LM, Seibyl J, Singleton A, Toga AW, Galasko D, Foroud T, Nudelman K, Tosun-Turgut D, Poston K, Weintraub D, Mollenhauer B, Tanner CM, Kieburtz K, Chahine LM, Reimer A, Hutten S, Bressman S, Marek K, Coffey C, Tanner C, Toga A, Galasko D, Poewe W, Arnedo V, Clark A, Frasier M, Kopil C, Chowdhury S, Sherer T, Daegele N, Casaceli C, Dorsey R, Wilson R, Mahes S, Salerno C, Crawford K, Casalin P, Malferrari G, Weisz MG, Orr-Urtreger A, Trojanowski J, Shaw L, Montine T, Baglieri C, Christini A, Russell D, Dahodwala N, Giladi N, Factor S, Hogarth P, Standaert D, Hauser R, Jankovic J, Saint-Hilaire M, Richard I, Shprecher D, Fernandez H, **Brockmann K**, Rosenthal L, Barone P, Espay A, Rowe D, Marder K, Santiago A, Hu SC, Isaacson S, Corvol JC, Martinez JR, Tolosa E, Tai Y, Politis M, Smejdir D, Rees L, Williams K, Kausar F, Richardson W, Willeke D, Peacock S, Sommerfeld B, Freed A, Wakeman K, Blair C, Guthrie S, Harrell L, Hunter C, Thomas CA, James R, Zimmerman G, Brown V, Mule J, Hilt E, Ribb K, Ainscough S, Wethington M, Ranola M, Santana HM, Moreno J, Raymond D, Speketer K, Carvajal L, Carvalo S, Croitoru I, Garrido A, Payne LM, Viswanth V, Severt L, Facheris M, Soares H, Mintun MA, Cedarbaum J, Taylor P, Biglan K, Vandenbroucke E, Sheikh ZH, Bingol B, Fischer T, Sardi P, Forrat R, Reith A, Egebjerg J, Hillert GA, Saba B, Min C, Umek R, Mather J, De Santi S, Post A, Boess F, Taylor K, Grachev I, Avbersek A, Muglia P, Merchant K, Tauscher J, Parkinsons Progression Markers Initiative (2020) Clinical and dopamine transporter imaging characteristics of leucine- rich repeat kinase 2 (LRRK2) and glucosylceramidase beta (GBA) Parkinson's disease participants in the Parkinson's progression markers initiative: A cross-sectional study. *Movement Disorders* 35:833-44

Simuni T, Uribe L, Cho HR, Caspell-Garcia C, Coffey CS, Siderowf A, Trojanowski JQ, Shaw LM, Seibyl J, Singleton A, Toga AW, Galasko D, Foroud T, Tosun D, Poston K, Weintraub D, Mollenhauer B, Tanner CM, Kieburtz K, Chahine LM, Reimer A, Hutten SJ, Bressman S, Marek K, Arnedo V, Clark A, Fraiser M, Kopil C, Chowdhury S, Sherer T, Daegele N, Salerno C, Casaceli C, Dorsey R, Wilson R, Mahes S, Crawford K, Casalin P, Malferrari G, GaniWeisz M, Orr-Urtreger A, Montine T, Baglieri C, Christini A, Russell D, Dahodwala N, Giladi N, Factor S, Hogarth P, Standaert D, Hauser R, Jankovic J, Saint-Hilaire M, Richard I, Shprecher D, Fernandez H, **Brockmann K**, Rosenthal L, Barone P, Espay A, Rowe D, Marder K, Santiago A, Hu SC, Isaacson S, Corvol JC, Martinez JR, Tolosa E, Tai Y, Politis M, Smejdir D, Rees L, Williams K, Kausar F, Williams K, Richardson W, Willeke D, Peacock S, Sommerfeld B, Freed A, Wakeman K, Blair C, Guthrie S, Harrell L, Hunter C, Thomas CA, James R, Zimmerman G, Brown V, Mule J, Hilt E, Ribb K, Ainscough S, Wethington M, Ranola M, Santana HM, Moreno J, Raymond D, Speketer K, Carvalo S, Croitoru I, Garrido A, Payne LM, Viswanth V, Severt L, Facheris M, Soares H, Mintun MA, Cedarbaum J, Taylor P, Biglan K, Vandenbroucke E, Sheikh ZH, Bingol B, Fischer T, Sardi P, Forrat R, Reith A, Egebjerg J, Hillert GA, Saba B, Min C, Umek R, Mather J, De Santi S, Post A, Boess F, Taylor K, Grachev I, Avbersek A, Muglia P, Merchant K, Tauscher J, Investigators P (2020) Clinical and dopamine transporter imaging characteristics of non-manifest LRRK2 and GBA mutation carriers in the Parkinson's Progression Markers Initiative (PPMI): A cross-sectional study. *Lancet Neurology* 19:71-80

Singleton AB, **Gasser T** (2020) The discovery of LRRK2 mutations as a cause of Parkinson's disease. *Movement Disorders* 35:551-54

Slavotinek A, van Hagen JM, Kalsner L, Pai S, Davis-Keppen L, Ohden L, **Weber YG**, Macke EL, Klee EW, Morava E, Gunderson L, Person R, Liu SX, Weiss M (2020) Jumonji domain containing 1C (JMJD1C) sequence variants in seven patients with autism spectrum disorder, intellectual disability and seizures. *European Journal of Medical Genetics* 63:6

Sohrabi HR, Goozee K, Weinborn M, Shen K, Brown BM, Rainey-Smith SR, Salvado O, Taddei K, Bucks RS, Maruff P, Laws SM, Lenzo N, Laws M, DeYoung C, Speelman C, **Laske C**, Ames D, Savage G, Martins RN (2020) Personality factors and cerebral glucose metabolism in community-dwelling older adults. *Brain Structure & Function* 225:1511-22

Sperber C (2020) Rethinking causality and data complexity in brain lesion-behaviour inference and its implications for lesion-behaviour modelling. *Cortex* 126:49-62

Sperber C, Clausen J, Benke T, **Karnath HO** (2020) The anatomy of spatial neglect after posterior cerebral artery stroke. *Brain Communications* 2:fcaa163

Sperber C, Dadashi A (2020) The influence of sample size and arbitrary statistical thresholds in lesion-network mapping. *Brain* 143:e40

Sperber C, Karnath HO (2020) Inhibition between human brain areas or methodological artefact? *Brain* 143:e38

Sperber C, Nolingberg C, Karnath HO (2020) Post-stroke cognitive deficits rarely come alone: Handling co-morbidity in lesion-behaviour mapping. *Human Brain Mapping* 41:1387-99

Stahl JH, Kegele J, Winter N, Lindig T, Schuhmann M, Godel T, Bendszus M, Kolbenschlag J, **Grimm A**, Daigeler A, Mayer JA (2020) Spontaneous lesion of the anterior interosseous nerve - an interdisciplinary challenge. *Klinische Neurophysiologie* 51:91-93

Stefanou MI, Galevska D, Zrenner C, Ziemann U, Nieminen JO (2020) Interhemispheric symmetry of micro-rhythm phase-dependency of corticospinal excitability. *Scientific Reports* 10:7853

Stefanou MI, Gepfner-Tuma I, Brendle C, **Kowarik M**, Meiwes A, Eigentler T, Muller A, Garbe C, **Ziemann U, Tabatabai G**, Forschner A (2020) Posterior reversible encephalopathy syndrome in a melanoma patient with Dabrafenib and Trametinib treatment following immunotherapy. *Journal of the German Society of Dermatology* 18:136-39

Stefanou MI, Stadler V, Baku D, Hennersdorf F, Ernemann U, **Ziemann U, Poli S, Mengel A** (2020) Optimizing patient selection for interhospital transfer and endovascular therapy in acute ischemic stroke: Real-world data from a supraregional, hub-and-spoke neurovascular network in Germany. *Frontiers in Neurology* 11:600917

Steiner KM, Thier W, Batsikadze G, **Ludolph N, Ilg W**, Timmann D (2020) Lack of effects of a single session of cerebellar transcranial direct current stimulation (tDCS) in a dynamic balance task. *Journal of Neurology* 267:1206-08

Stendel C, Neuhofer C, Floride E, Yuqing S, Ganetzky RD, **Park J**, Freisinger P, Kornblum C, Kleinle S, **Schols L**, Distelmaier F, Stettner GM, Buchner B, Falk MJ, Mayr JA, **Synofzik M**, Abicht A, Haack TB, Prokisch H, Wortmann SB, Murayama K, Fang F, Klopstock T, Group ATPS (2020) Delineating MT-ATP6-associated disease: From isolated neuropathy to early onset neurodegeneration. *Neurology Genetics* 6:e393

Stollenmaier K, Ilg W, Haeufle DFB (2020) Predicting perturbed human arm movements in a neuro-musculoskeletal model to investigate the muscular force response. *Frontiers in Bioengineering and Biotechnology* 8:308

Suarez JI, Martin RH, Bauza C, Georgiadis A, Venkatasubba Rao CP, Calvillo E, Hemphill JC, 3rd, Sung G, Oddo M, Taccone FS, LeRoux PD, Price Study Investigators – **Poli S** et al (2020) Worldwide organization of neurocritical care: Results from the prince study part 1. *Neurocritical Care* 32:172-79

Sulzer P, Baumer A, Hoang HG, Becker S, Lonneker HD, Graessel E, **Liepelt-Scarfone I** (2020) Assessment of cognitive-driven performance-based activities of daily living dysfunction in Parkinson's disease. *Journal of the International Neuropsychological Society* 26:430-40

Sulzer P, Liebig L, Csoti I, Graessel E, **Wurster I**, Berg D, **Liepelt-Scarfone I** (2020) A time-efficient screening tool for activities of daily living functions in Parkinson's disease dementia. *Journal of Clinical and Experimental Neuropsychology* 42:867-79

Sykora M, Kellert L, Michel P, Eskandari A, Feil K, Remi J, Ferrari J, Krebs S, Lang W, Serles W, Siarnik P, Turcani P, Kovacik M, Bender B, **Mengel A, Poli K, Poli S** (2020) Thrombolysis in stroke with unknown onset based on non-contrast computerized tomography (TRUST CT). *Journal of the American Heart Association* 9:e014265

Tang S, Addis L, Smith A, Topp SD, Pendziwiat M, Mei D, Parker A, Agrawal S, Hughes E, Lascelles K, Williams RE, Fallon P, Robinson R, Cross HJ, Hedderly T, Eltze C, Kerr T, Desurkar A, Hussain N, Kinali M, Bagnasco I, Vassallo G, Whitehouse W, Goyal S, Absoud M, Moller RS, Helbig I, **Weber YG**, Marini C, Guerrini R, Simpson MA, Pal DK, Euro E-RESC (2020) Phenotypic and genetic spectrum of epilepsy with myoclonic atonic seizures. *Epilepsia* 61:995-1007

Tanriover G, Bacioglu M, Schweighauser M, Mahler J, Wegenast-Braun BM, Skodras A, Obermuller U, Barth M, Kronenberg-Versteeg D, Nilsson KPR, Shimshek DR, **Kahle PJ, Eisele YS, Jucker M** (2020) Prominent microglial inclusions in transgenic mouse models of alpha-synucleinopathy that are distinct from neuronal lesions. *Acta Neuropathologica Communications* 8:11

Tavares TP, Mitchell DGV, Coleman KK, Coleman BL, Shoesmith CL, Butler CR, Santana I, Danek A, Gerhard A, de Mendonca A, Borroni B, Tartaglia MC, Graff C, Galimberti D, Tagliavini F, Moreno F, Frisoni G, Rowe JB, Levin J, Van Swieten JC, Otto M, **Synofzik M**, Sanchez-Valle R, Vandenberghe R, Laforce RJ, Ghidoni R, Sorbi S, Ducharme S, Masellis M, Rohrer J, Finger E (2020) Early symptoms in symptomatic and preclinical genetic frontotemporal lobar degeneration. *Journal of Neurology, Neurosurgery and Psychiatry* 91:975-84

Tesson C, **Lohmann E**, Devos D, Bertrand H, Lesage S, Brice A (2020) Segregation of ATP10B variants in families with autosomal recessive Parkinsonism. *Acta Neuropathologica* 140:783-85

Tetreault AM, Phan T, Petersen KJ, Claassen DO, Neth BJ, Graff-Radford J, Albrecht F, Fliessbach K, Schneider A, **Synofzik M**, Diehl-Schmid J, Otto M, Schroeter ML, Darby RR, Repeat Tau Neuroimaging I (2020) Network localization of alien limb in patients with corticobasal syndrome. *Annals of Neurology* 88:1118-31

Thieme A, Roeske S, Faber J, Sulzer P, Minnerop M, Elben S, Jacobi H, Reetz K, Dogan I, Barkhoff M, Konczak J, Wondzinski E, Siebler M, Mueller O, Sure U, Schmahmann JD, Klockgether T, **Synofzik M**, Timmann D (2020) Validation of a German version of the Cerebellar Cognitive Affective/ Schmahmann Syndrome Scale: Preliminary version and study protocol. *Neurological Research and Practice* 2:39

Thomalla G, Boutitie F, Ma H, Koga M, Ringleb P, Schwamm LH, Wu O, Bendszus M, Bladin CF, Campbell BCV, Cheng B, Churilov L, Ebinger M, Endres M, Fiebach JB, Fukuda-Doi M, Inoue M, Kleinig TJ, Latour LL, Lemmens R, Levi CR, Leys D, Miwa K, Molina CA, Muir KW, Nighoghossian N, Parsons MW, Pedraza S, Schellinger PD, Schwab S, Simonsen CZ, Song SS, Thijs V, Toni D, Hsu CY, Wahlgren N, Yamamoto H, Yassi N, Yoshimura S, Warach S, Hacke W, Toyoda K, Donnan GA, Davis SM, Gerloff C, Evaluation of unknown Onset Stroke thrombolysis trials (EOS) Investigators – **Poli S, Zlemann U** et al (2020) Intravenous alteplase for stroke with unknown time of onset guided by advanced imaging: Systematic review and meta-analysis of individual patient data. *Lancet* 396:1574-84

Tkaczynska Z, Becker S, Maetzler W, Timmers M, Van Nueten L, **Sulzer P**, Salvadore G, Schaffer E, **Brockmann K**, Streffer J, Berg D, **Liepelt-Scarfone I** (2020) Executive function is related to the urinary urgency in non-demented patients with Parkinson's disease. *Frontiers in Aging Neuroscience* 12:9

Traschuetz A, Schirinzi T, Laugwitz L, Murray NH, Bingman CA, Reich S, Kern J, Heinzmann A, Vasco G, Bertini E, Zanni G, Durr A, Magri S, Taroni F, Malandrini A, Baets J, de Jonghe P, de Ridder W, Bereau M, Demuth S, Ganos C, Basak AN, Hanagasi H, Kurul SH, Bender B, Schoels L, Grasshoff U, Klopstock T, Horvath R, van de Warrenburg B, Burglen L, Rougeot C, Ewenczyk C, Koenig M, Santorelli FM, Anheim M, Munhoz RP, Haack T, Distelmaier F, Pagliarini DJ, Puccio H, **Synofzik M** (2020) Clinico-genetic, imaging and molecular delineation of COQ8A-ataxia: A multicenter study of 59 patients. *Annals of Neurology* 88:251-63

Tscherpel C, Dern S, Hensel L, **Ziemann U**, Fink GR, Grefkes C (2020) Brain responsivity provides an individual readout for motor recovery after stroke. *Brain* 143:1873-88

Tungler V, Doebler-Neumann M, Salandin M, Kaufmann P, Wolf C, Lucas N, Harmuth F, **Reichbauer J**, Krageloh-Mann I, **Schule R**, Lee-Kirsch MA (2020) Aicardi-Goutieres syndrome due to a paternal mosaic *IFIH1* mutation. *Neurology Genetics* 6:3

Tuzzi E, Balla DZ, Loureiro JRA, Neumann M, **Laske C**, Pohmann R, **Preische O**, Scheffler K, Hagberg GE (2020) Ultra-high field MRI in Alzheimer's disease: Effective transverse relaxation rate and quantitative susceptibility mapping of human brain in vivo and ex vivo compared to histology. *Journal of Alzheimer's Disease* 73:1481-99

Uhlmann RE, Rother C, Rasmussen J, Schelle J, Bergmann C, Ullrich Gavilanes EM, Fritschi SK, Buehler A, Baumann F, Skodras A, Al-Shaana R, Beschorner N, Ye L, Kaeser SA, Obermuller U, Christensen S, Kartberg F, Stavenhagen JB, Rahfeld JU, Cynis H, Qian F, Weinreb PH, Bussiere T, Walker LC, **Staufenbiel M, Jucker M** (2020) Acute targeting of pre-amyloid seeds in transgenic mice reduces Alzheimer-like pathology later in life. *Nature Neuroscience* 23:1580-88

Uslu A, Ergen M, Demirci H, **Lohmann E**, Hanagasi H, Demiralp T (2020) Event-related potential changes due to early-onset Parkinson's disease in Parkin (PARK2) gene mutation carriers and non-carriers. *Clinical Neurophysiology* 131:1444-52

Uter JC, Kraemer UM, **Schoels L**, Rodriguez-Fornells A, Goebel A, Heldmann M, Lichtner P, Brabant G, Muente TF (2020) Single nucleotide polymorphisms in thyroid hormone transporter genes MCT8, MCT10 and Deiodinase DIO2 contribute to inter-individual variance of executive functions and personality traits. *Experimental and Clinical Endocrinology & Diabetes* 128:573-81

van den Bent M, Azaro A, De Vos F, Sepulveda J, Yung WKA, Wen PY, Lassman AB, Joerger M, **Tabatabai G**, Rodon J, Tiedt R, Zhao S, Kirsilae T, Cheng Y, Vicente S, Balbin OA, Zhang H, Wick W (2020) A phase Ib/II, open-label, multicenter study of INC280 (capmatinib) alone and in combination with buparlisib (BKM120) in adult patients with recurrent glioblastoma. *Journal of Neuro-Oncology* 146:79-89

van der Ende EL, Xiao M, Xu D, Poos JM, Panman JL, Jiskoot LC, Meeter LH, Dopper EGP, Papma JM, Heller C, Convery R, Moore K, Bocchetta M, Neason M, Peakman G, Cash DM, Teunissen CE, Graff C, **Synofzik M**, Moreno F, Finger E, Sanchez-Valle R, Vandenberghe R, Laforce R, Jr., Masellis M, Tartaglia MC, Rowe JB, Butler CR, Ducharme S, Gerhard A, Danek A, Levin J, Pijnenburg YAL, Otto M, Borroni B, Tagliavini F, de Mendonca A, Santana I, Galimberti D, Seelaar H, Rohrer JD, Worley PF, van Swieten JC, Genetic Frontotemporal Dementia I (2020) Neuronal pentraxin 2: A synapse-derived CSF biomarker in genetic frontotemporal dementia. *Journal of Neurology, Neurosurgery and Psychiatry* 91:612-21

Vardar G, Gerth F, Schmitt XJ, Rautenstrauch P, Trimbuch T, **Schubert J, Lerche H**, Rosenmund C, Freund C (2020) Epilepsy-causing STX1B mutations translate altered protein functions into distinct phenotypes in mouse neurons. *Brain* 143:2119-38

Velazquez-Perez L, Rodriguez-Labrada R, Gonzalez-Garces Y, Arrufat-Pie E, Torres-Vega R, Medrano-Montero J, Ramirez-Bautista B, Vazquez-Mojena Y, Auburger G, Horak F, **Ziemann U**, Gomez CM (2021) Prodromal spinocerebellar ataxia type 2 subjects have quantifiable gait and postural sway deficits. *Movement Disorders* 36:471-80

Venkatasubba Rao CP, Suarez JI, Martin RH, Bauza C, Georgiadis A, Calvillo E, Hemphill JC, 3rd, Sung G, Oddo M, Taccone FS, LeRoux PD, PRINCE Study Investigators – **Poli S** et al (2020) Global survey of outcomes of neurocritical care patients: Analysis of the Prince study part 2. *Neurocritical Care* 32:88-103

Vogel AP, Magee M, Torres-Vega R, Medrano-Montero J, Cyngler MP, Kruse M, Rojas S, Cubillos SC, Canento T, Maldonado F, Vazquez-Mojena Y, **Ilg W**, Rodriguez-Labrada R, Velazquez-Perez L, **Synofzik M** (2020) Features of speech and swallowing dysfunction in pre-ataxic spinocerebellar ataxia type 2. *Neurology* 95:E194-E205

Wenzel DA, Kromer R, **Poli S**, Steinhorst NA, Casagrande MK, Spitzer MS, Schultheiss M (2021) Optical coherence tomography-based determination of ischaemia onset - the temporal dynamics of retinal thickness increase in acute central retinal artery occlusion. *Acta Ophthalmologica* 99:e247-e52

Wickham J, Corna A, **Schwarz N, Uysal B, Layer N**, Honegger JB, **Wuttke TV, Koch H**, Zeck G (2020) Human cerebrospinal fluid induces neuronal excitability changes in resected human neocortical and hippocampal brain slices. *Frontiers in Neuroscience* 14:14

Wiesen D, Karnath HO, Sperber C (2020) Disconnection somewhere down the line: Multivariate lesion-symptom mapping of the line bisection error. *Cortex* 133:120-32

Wilke C, Dos Santos MCT, **Schulte C, Deuschle C**, Scheller D, Verbelen M, **Brockmann K, von Thaler AK, Sunkel U, Roeben B**, Bujac S, Metzger FG, **Maetzler W**, da Costa AN, **Synofzik M, Berg D** (2020) Intraindividual neurofilament dynamics in serum mark the conversion to sporadic Parkinson's disease. *Movement Disorders* 35:1233-38

Wilke C, Haas E, Reetz K, Faber J, Garcia-Moreno H, Santana MM, van de Warrenburg B, **Hengel H**, Lima M, Filla A, Durr A, Melegh B, Masciullo M, Infante J, Giunti P, Neumann M, de Vries J, de Almeida LP, Rakowicz M, Jacobi H, **Schule R, Kaeser SA**, Kuhle J, Klockgether T, **Schols L**, Barro C, Hubener-Schmid J, **Synofzik M**, Grp SCANS (2020) Neurofilaments in spinocerebellar ataxia type 3: Blood biomarkers at the preataxic and ataxic stage in humans and mice. *EMBO Molecular Medicine* 12:19

Willmann C, **Brockmann K**, Wagner R, Kullmann S, Preissl H, Schnauder G, Maetzler W, **Gasser T, Berg D**, Eschweiler GW, Metzger F, Fallgatter AJ, Haring HU, Fritsche A, Heni M (2020) Insulin sensitivity predicts cognitive decline in individuals with prediabetes. *BMJ Open Diabetes Research & Care* 8:7

Winter N, Gessner M, Schuhmann MU, **Grimm A** (2020) Painful kiloh-nevin plus syndrome after cimino-shunt. *Neurological Sciences* 41:2281-82

Wochner I, Driess D, Zimmermann H, **Haeufle DFB**, Toussaint M, Schmitt S (2020) Optimality principles in human point-to-manifold reaching accounting for muscle dynamics. *Frontiers in Computational Neuroscience* 14:38

Wolfsgruber S, Kleineidam L, Guski J, Polcher A, Frommann I, Roeske S, Spruth EJ, Franke C, Priller J, Kilimann I, Teipel S, Buerger K, Janowitz D, **Laske C**, Buchmann M, Peters O, Menne F, Fuentes Casan M, Wiltfang J, Bartels C, Duzel E, Metzger C, Glanz W, Thelen M, Spottke A, Ramirez A, Kofler B, Fliessbach K, Schneider A, Heneka MT, Brosseron F, Meiberth D, Jessen F, Wagner M, Group DS (2020) Minor neuropsychological deficits in patients with subjective cognitive decline. *Neurology* 95:e1134-e43

Wolking S, Moreau C, Nies AT, Schaeffeler E, McCormack M, Auce P, Avbersek A, **Becker F**, Krenn M, Moller RS, Nikanorova M, **Weber YG**, Weckhuysen S, Cavalleri GL, Delanty N, Depondt C, Johnson MR, Koeleman BPC, Kunz WS, Marson AG, Sander JW, Sills GJ, Striano P, Zara F, Zimprich F, Schwab M, Krause R, Sisodiya SM, Cossette P, Girard SL, **Lerche H**, Epi PGXC (2020) Testing association of rare genetic variants with resistance to three common antiseizure medications. *Epilepsia* 61:657-66

Wolking S, Schulz H, Nies AT, McCormack M, Schaeffeler E, Auce P, Avbersek A, **Becker F**, Klein KM, Krenn M, Moller RS, Nikanorova M, Weckhuysen S, Cavalleri GL, Delanty N, Depondt C, Johnson MR, Koeleman BPC, Kunz WS, Marson AG, Sander JW, Sills GJ, Striano P, Zara F, Zimprich F, **Weber YG**, Krause R, Sisodiya S, Schwab M, Sander T, **Lerche H**, Epi PC (2020) Pharmacoresponse in genetic generalized epilepsy: A genome-wide association study. *Pharmacogenomics* 21:325-35

Wurster I, Lerche S, Hauser AK, **Schulte C**, Lachmann I, Beschorner R, Neumann M, **Brockmann K** (2020) Do longitudinal cerebrospinal fluid profiles correspond to postmortem brain pathology in LRRK2 Parkinson's disease? *European Journal of Neurology* 27:E5-E6

Zimmermann M, Schuster S, Boesch S, Korenke GC, Mohr J, **Reichbauer J**, Kernstock C, Kotzot D, **Spahlinger V, Schule-Freyer R, Schols L** (2020) FIG4 mutations leading to Parkinsonism and a phenotypical continuum between CMT4J and yunis varon syndrome. *Parkinsonism & Related Disorders* 74:6-11

Zimmermann M, Wurster I, Lerche S, Roeben B, Machetanz G, Sunkel U, von Thaler AK, Eschweiler G, Fallgatter AJ, Maetzler W, Berg D, **Brockmann K** (2020) Orthostatic hypotension as a risk factor for longitudinal deterioration of cognitive function in the elderly. *European Journal of Neurology* 27:160-67

Zipfel J, Al-Hariri M, Gugel I, Haas-Lude K, **Grimm A**, Warmann S, Krimmel M, Mautner VF, Tatagiba M, Schuhmann MU (2020) Surgical management of peripheral nerve sheath tumours in children, with special consideration of neurofibromatoses. *Childs Nervous System* 36:2433-42

Zrenner B, Baur D, Gordon PC, Ziemann U (2020) Nicht-invasive Hirnstimulationsverfahren nach Schlaganfall. Wertvolles instrument bei schwer geschädigtem Gehirn. *NeuroTransmitter* 31:24-29

Zrenner B, Zrenner C, Gordon PC, Belardinelli P, McDermott EJ, Soekadar SR, Fallgatter AJ, **Ziemann U, Muller-Dahlhaus F** (2020) Brain oscillation-synchronized stimulation of the left dorsolateral prefrontal cortex in depression using real-time EEG-triggered TMS. *Brain Stimulation* 13:197-205

Zrenner C, Galevska D, Nieminen JO, **Baur D, Stefanou MI, Ziemann U** (2020) The shaky ground truth of real-time phase estimation. *Neuroimage* 214:116761

Reviews

Asher DM, Belay E, Bigio E, Brandner S, Brubaker SA, Caughey B, Clark B, Damon I, Diamond M, Freund M, Hyman BT, **Jucker M**, Keene CD, Lieberman AP, Mackiewicz M, Montine TJ, Morgello S, Phelps C, Safar J, Schneider JA, Schonberger LB, Sigurdson C, Silverberg N, Trojanowski JQ, Frosch MP (2020) Risk of transmissibility from neurodegenerative disease-associated proteins: Experimental knowns and unknowns. *Journal of Neuropathology & Experimental Neurology* 79:1141-46

Dengler R, de Carvalho M, Shahrizaila N, Nodera H, Vucic S, **Grimm A**, Padua L, Schreiber S, Kneiser MK, Hobson-Webb LD, Boon AJ, Smith BE, Litchy WJ, Li YB, Lenihan M, Thompson VB, Stalberg E, Sanders DB, Kincaid JC (2020) AANEM – IFCN glossary of terms in neuromuscular electrodiagnostic medicine and ultrasound. *Clinical Neurophysiology* 131:1662-63

Dengler R, de Carvalho M, Shahrizaila N, Nodera H, Vucic S, **Grimm A**, Padua L, Schreiber S, Kneiser MK, Hobson-Webb LD, Boon AJ, Smith BE, Litchy WJ, Li YB, Lenihan M, Thompson VB, Stalberg E, Sanders DB, Kincaid JC (2020) AANEM – IFCN glossary of terms in neuromuscular electrodiagnostic medicine and ultrasound. *Muscle & Nerve* 62:10-12

Dohrn MF, **Winter N**, Dafotakis M (2020) Causes, spectrum, and treatment of the diabetic neuropathy. *Nervenarzt* 91:714-21

Eltokhi A, Janmaat IE, Genedi M, Haarman BCM, Sommer IEC (2020) Dysregulation of synaptic pruning as a possible link between intestinal microbiota dysbiosis and neuropsychiatric disorders. *Journal of Neuroscience Research* 98:1335-69

Eltokhi A, Santuy A, Merchan-Perez A, Sprengel R (2020) Glutamatergic dysfunction and synaptic ultrastructural alterations in schizophrenia and autism spectrum disorder: Evidence from human and rodent studies. *International Journal of Molecular Sciences* 22:26

Gloeckner CJ, Porras P (2020) Guilt-by-association - functional insights gained from studying the LRRK2 interactome. *Frontiers in Neuroscience* 14:14

Grimm A, Winter N, Kolbenschlag J, Herlan S, Stahl JH, Mayer J, Daigeler A, Schuhmann MU (2020) The interdisciplinary diagnostics and treatment of peripheral nerve lesions. *Nervenarzt* 91:1149-63

Khakipoor S, Crouch EE, **Mayer S** (2020) Human organoids to model the developing human neocortex in health and disease. *Brain Research* 1742:146803

Lerche H (2020) Drug-resistant epilepsy - Time to target mechanisms. *Nature Reviews Neurology* 16:595-96

Schaeffer E, Kluge A, Boettner M, Zunke F, Cossais F, **Berg D**, Arnold P (2020) Alpha synuclein connects the gut-brain axis in Parkinson's disease patients – A view on clinical aspects, cellular pathology and analytical methodology. *Frontiers in Cell and Developmental Biology* 8:573696

Weiss D, Schoellmann A, Fox MD, Bohnen NI, Factor SA, Nieuwboer A, Hallett M, Lewis SJG (2020) Freezing of gait: Understanding the complexity of an enigmatic phenomenon. *Brain* 143:14-30

Winter N, Dohrn MF, **Wittlinger J**, Loizides A, Gruber H, **Grimm A** (2020) Role of high-resolution ultrasound in detection and monitoring of peripheral nerve tumor burden in neurofibromatosis in children. *Childs Nervous System* 36:2427-32

Ziemann U (2020) I-waves in motor cortex revisited. *Experimental Brain Research* 238:1601-10

Book Chapters

Karnath HO, Sperber C, Wiesen D, de Haan B (2020) Lesion-behaviour mapping in cognitive neuroscience: A practical guide to univariate and multivariate approaches. In: Pollmann S (Ed.), *Spatial Learning and Attention Guidance – Neuromethods Series* (pp. 209-38). Humana Press

Rorden C, **Karnath HO** (2020) Functional brain imaging in stroke patients. In: Lazar RM, Pavol MA, Browndyke JN (Eds.), *Neurovascular Neuropsychology* (2nd ed., pp. 399-413). Springer

Salatiello A, Giese MA (2020) Recurrent neural network learning of performance and intrinsic population dynamics from sparse neural data. In: Farkaš I, Masulli P, Wermter S (Eds.), *Artificial Neural Networks and Machine Learning – ICANN 2020* (pp. 874-86). Springer International Publishing

Stettler M, Taubert N, Azizpour T, Siebert R, Spadacenta S, Dicke P, Thier P, Giese MA (2020) Physiologically-inspired neural circuits for the recognition of dynamic faces. In: Farkaš I, Masulli P, Wermter S (Eds.), *Artificial Neural Networks and Machine Learning – ICANN 2020* (pp. 168-79). Springer International Publishing

Taubert N, St. Amand J, Kumar P, Gizzi L, **Giese MA** (2020) Reactive hand movements from arm kinematics and emg signals based on hierarchical gaussian process dynamical models. In: Farkaš I, Masulli P, Wermter S (Eds.), *Artificial Neural Networks and Machine Learning – ICANN 2020* (pp. 127-40). Springer International Publishing

Vermeer S, van de Warrenburg BP, Kamsteeg EJ, Brais B, **Synofzik M** (2020) Arsacs. In: Adam MP, Ardinger HH, Pagon RA, Wallace SE, Bean LJH, Mirzaa G, Amemiya A (Eds.), *Genereviews® [Internet]*. University of Washington, Seattle (1993-2021). Available from: https://www.ncbi.nlm.nih.gov/books/NBK1255/

List of Student Training in 2020

(In alphabetical order)

Lectures

(Summer Term/Winter Term)

Basic Neurobiology
Prof. Dr. Philipp Kahle (coordinator and lecturer), Jun.-Prof. Dr. Dr. Michela Deleidi, Prof. Dr. Ingrid Ehrlich, Dr. Julia Fitzgerald, Dr. Ulrike Hedrich, Dr. Simone Mayer, Dr. Jonas Neher, Prof. Dr. Daniel Weiß
Curriculum Molecular Medicine

Basispropädeutik Laborforschung und Tiermodelle
Prof. Dr. Uwe Ilg
Faculty of Science (Biology)

Behavior and Cognition: Methods in Neuropsychology
PD Dr. M. Himmelbach, Dr. Christoph Sperber
Graduate Training Centre of Neuroscience

Behavior and Cognition: Neuropsychology
Prof. Dr. Dr. Hans-Otto Karnath, PD Dr. Axel Lindner
Graduate Training Centre of Neuroscience

Biochemistry II for Medical Students
Prof. Dr. Philipp Kahle
Faculty of Science (Biochemistry)

Biomedical Technologies in Diagnostic and Therapy
Prof. Dr. Christoph Braun
Faculty of Medicine (Biomedical Technology)

BioRobotics
Dr. Daniel Häufle
Faculty of Science (Informatics)

Cholesterol Metabolism for Medical Students
Dr. Julia Fitzgerald
Faculty of Science (Biochemistry)

Computational Motor Control
Dr. Winfried Ilg, Dr. Daniel Häufle
Graduate Training Centre of Neuroscience

Developmental Neurobiology
Dr. Simone Mayer
Graduate Training Centre of Neuroscience

Dynamics of Neural Systems
Prof. Dr. Martin Giese
Graduate Training Centre of Neuroscience

Frontiers in Neuroscientific Methods
PD Dr. Marc Himmelbach, Prof. Dr. Ziad Hafed
Graduate Training Centre of Neuroscience

Fundamentals of Sensorimotor Integration
Prof. Dr. Uwe Ilg
Graduate Training Centre of Neuroscience

Genetic and Molecular Basis of Neural Diseases I
Prof. Dr. Mathias Jucker, Prof. Dr. Thomas Gasser, Prof. Dr. Ludger Schöls, Prof. Dr. Manuela Neumann
Graduate Training Centre of Neuroscience

Genetic and Molecular Basis of Neural Diseases II
Prof. Dr. Holger Lerche, Prof. Dr. Ulrike Naumann, Dr. Ulrike Hedrich, Dr. Henner Koch, PD Dr. Markus Krumbholz
Graduate Training Centre of Neuroscience

Genome-Editing Technologies for Gene and Stem Cell Therapy
Jun. Prof. Dr. Dr. Michela Deleidi
Graduate Training Centre of Neuroscience

Introduction to Clinical Neurology
PD Dr. Kathrin Brockmann, PD Dr. Markus Krumbholz, Prof. Dr. Daniel Weiß
Medical Faculty

Lecture General Neurology
Prof. Dr. Thomas Gasser, Prof. Dr. Holger Lerche, Prof. Dr. Dr. Ghazaleh Tabatabai, Prof. Dr. Ulf Ziemann, Prof. Dr. Hans-Otto Karnath, Prof. Dr. Alexander Grimm
Medical Faculty

Lecture series for doctoral candidates: Ion Channels and Epilepsy
Prof. Dr. Holger Lerche, Dr. Ulrike Hedrich
Graduate Training Centre of Neuroscience

Lecture Series on the Fundamentals of Neurobiology – Part I + II
Dr. Ulrike Hedrich
Graduate Training Centre of Neuroscience

LSC Wissenschaftlichkeit – Säulenpropädeutik Grundlagenwissenschaften
PD Dr. Marc Himmelbach, Prof. Dr. Uwe Ilg
Medical Faculty

Machine Learning
Prof. Dr. Martin Giese
Graduate Training Centre of Neuroscience

Massenspektrometrie in Diagnostik & Therapiemonitoring
Prof. Dr. Marius Ueffing, Dr. Janina Dalvise (both Institute for Ophthalmic Research), PD Dr. Christian Johannes Gloeckner
Medical Faculty

Medical Physics
Prof. Dr. Christoph Braun
Medical Faculty (Molecular Medicine)

Mitochondrial Metabolism
Dr. Julia Fitzgerald
Current Topics in Cellular Metabolism,
University of Tübingen

Motor Systems
Prof. Dr. Peter Thier
Graduate Training Centre of Neuroscience

Motor Systems NIPS
Prof. Dr. Cornelius Schwarz
Graduate Training Centre of Neuroscience

Multimodal Therapy of Parkinson's Disease for Pharmacists
PD Dr. Rebecca Schüle
Faculty of Science

Neurochemistry and Neurotransmitters
Prof. Dr. Philipp Kahle
Graduate Training Centre of Neuroscience

Neurogenesis, Excitability, Plasticity and Neurostimulation
Dr. Christoph Zrenner
Medical Technology – Human Biology IV

Neuroglia
Dr. Jonas Neher
Graduate Training Centre of Neuroscience

Neurointensive Care
Prof. Dr. Jennifer Diedler, Dr. Johannes Platz, Dr. Annerose Mengel
Medical Faculty

Neurological Emergencies (QB8)
PD Dr. Sven Poli
Medical Faculty

Neurophysiology
Prof. Dr. Cornelius Schwarz, Dr. Christine Pedroarena
Graduate Training Centre of Neuroscience

Perception, Cognition & Behavior
PD Dr. Marc Himmelbach, Prof. Dr. Ziad Hafed, Prof. Dr. Andreas Bartels
Graduate Training Centre of Neuroscience

Physiological and Physical Basis of Functional Brain Imaging
Prof. Dr. Christoph Braun, Prof. Dr. Andreas Bartels
Graduate Training Centre of Neuroscience

QB4 Infections & Immunology
Dr. Annerose Mengel, PD Dr. Markus Kowarik, PD Dr. Markus Krumbholz, PD Dr. Sven Poli
Medical Faculty

Rare neurological diseases: Interdisciplinary Medicine and Translational Research
Prof. Dr. Ludger Schöls
Medical Faculty

Ringvorlesung Wissenschaflichkeit (Neuroscience)
Prof. Dr. Mathias Jucker, Prof. Thomas Euler, Prof. Birgit Derntl
Medical Faculty

Sensory Systems IA: Visual System
Prof. Dr. Ziad Hafed
Graduate Training Centre of Neuroscience

Sensory Systems IB: Visual System
Dr. Christina Schwarz, Prof. Dr. Ziad Hafed, Prof. Dr. Francois Paquet-Durand, Dr. Timm Schubert, Prof. Dr. Marius Ueffing
Graduate Training Centre of Neuroscience

Sensory Systems II: Auditory and remaining
Prof. Dr. Christoph Braun, Prof. Dr. Anthony Gummer, Prof. Dr. Horst Herbert, Prof. Dr. Francois Paguet-Durand, Prof. Dr. Lukas Tüttiger
Graduate Training Centre of Neuroscience

Theoretical Methods for Computational Neuroscience I & II
Prof. Dr. Martin Giese
Graduate Training Centre of Neuroscience

Ultraschall in der Neurologie
Prof. Dr. Alexander Grimm
Medical Faculty

Seminars and Courses

(Summer Term/Winter Term)

Addressing Current Questions in Research on Sensorimotor Coordination
Prof. Dr. Peter Thier
Medical Faculty

Advanced Methods in Molecular and Translational Neuroscience (Research Internship)
Prof. Dr. Philipp Kahle
M.Sc. Molecular and Translational Neuroscience, Ulm University

Animal Physiology Practical for Students of Bioinformatics (BSc)
Prof. Dr. Uwe Ilg
Faculty of Science (Biology)

Basics in Gene Therapy
Prof. Dr. Ulrike Naumann
Medical Faculty

Bedside Teaching: Neurological Examination for Advanced Students
Prof. Dr. Ludger Schöls, PD Dr. Rebecca Schüle, Prof. Dr. Matthis Synofzik
Medical Faculty

Bedside Training: Neurological Diagnostics
Gabriela Zaiser, Nathalie Vetter, Yvonne Schütze, Prof. Dr. Alexander Grimm, Dr. Benjamin Röben, Dr. Tobias Lindig
Medical Faculty

Bedside Training: Neurology and Epileptology
Dr. Melanie Schreiber, Dr. Sabine Rona, Prof. Dr. Holger Lerche, Dr. Stephan Lauxmann, Dr. Benjamin Bender, Dr. Christian Boßelmann
Medical Faculty

BioRobotics
Dr. Daniel Häufle
Faculty of Science (Informatics)

Block Practical Electrophysiology
Prof. Dr. Cornelius Schwarz
Graduate Training Centre of Neuroscience

Chronic Pain Syndromes – Bedside Teaching (QB14)
PD Dr. Markus Krumbholz et al.
Medical Faculty

Clinical Neurophysiology
Dr. Pascal Martin
Medical Faculty

Clinical Pathological Case Conference (CPC)
Prof. Dr. Manuela Neumann (Dept. of Neuropathology, UKT), Prof. Dr. Matthis Synofzik
Medical Faculty

Clinic, Diagnosis and Therapy of Inflammatory Diseases of the Nervous System
PD Dr. Felix Bischof
Medical Faculty

Current Problems in Neuropsychology
Prof. Dr. Dr. Hans-Otto Karnath
Medical Faculty

Diagnosis and Intervention of Activity of Daily Living Function
Prof. Dr. Inga Liepelt-Scarfone
Faculty of Science (Psychology)

Die Natur des Sprachlauts – Phonology in the Brain
Prof. Dr. Ingo Hertrich
General Linguistics (Philosophical Faculty) and Cognitive Science (Faculty of Science)

Dynamics of Neural Systems (exercises)
Prof. Dr. Martin Giese, Dr. Albert Mukovskiy
Graduate Training Centre of Neuroscience

Geriatric-neurological-psychiatric Case Conference
Prof. Dr. Gerhard W. Eschweiler (UKT), Prof. Dr. Matthis Synofzik, Prof. Dr. Daniel Weiß, Dr. Günther Schnauder (UKT)
Medical Faculty

Gibt es zwei verschiedene Sprachen? Bedeutung und Wirkung -
the outer and the inner world in brain and language
Prof. Dr. Ingo Hertrich
General Linguistics (Philosophical Faculty) and Cognitive Science (Faculty of Science)

Hands-on rare neurological diseases:
Hospitation in ZSE clinics
Prof. Dr. Ludger Schöls
Medical Faculty

HER (now TüWIN) Seminar Series
Dr. Julia Fitzgerald
Tübingen Neuroscience Campus

Hertie Lunch Seminar
Prof. Dr. Uwe Ilg
Medical Faculty

i-KLiC
Prof. Bornemann, PD Dr. Markus Krumbholz, PD Dr. Markus Kowarik, PD Dr. Sven Poli et al.
Medical Faculty

In-Depth Module in MEd Studies Biology
Prof. Dr. Uwe Ilg
Faculty of Science (Biology)

INNOVATE: Interdisciplinary Neuro-Oncology from Molecular Mechanisms to Patient Stratification and Therapy
Prof. Dr. Dr. Ghazaleh Tabatabai
Medical Faculty, Graduate Training Centre of Neuroscience

Introduction to Transcranial Brain Stimulation
Dr. Til Ole Bergmann
Medical Faculty

Journal Club
Dr. Dr. Saskia Biskup, Dr. Julia Fitzgerald
Graduate School of Cellular and Molecular Neuroscience

Journal Club Computational Motor Control
Dr. Daniel Häufle
Graduate Training Centre of Neuroscience

Journal Club IZKF Promotionskolleg
Prof. Dr. Ulrike Naumann, Dr. Tanja Riess (Medical Faculty), Prof. Dr. Karin Schilbach (UKT)
Medical Faculty

Kick OFF Meeting IZKF Promotionskolleg
Prof. Dr. Ulrike Naumann, Dr. Tanja Riess (Medical Faculty), PD Dr. Marc Himmelbach, Prof. Dr. Karin Schilbach (UKT)
Medical Faculty

Lab Rotations, Cellular and Molecular Neurosciences
Prof. Dr. Philipp Kahle
Graduate Training Centre of Neuroscience

LSC Wissenschaftlichkeit – Projekt "Funktion des ventralen präfrontalen Kortex in der Bewertung der Funktionalität von Werkzeugen"
PD Dr. Marc Himmelbach
Medical Faculty

LSC Wissenschaftlichkeit – Projekt "Kongruenz funktioneller Netzwerke in resting-state und task-basierter funktioneller MRT"
PD Dr. Marc Himmelbach
Medical Faculty

Machine Learning I & II (exercises)
Prof. Dr. Martin Giese, Michael Stettler
Graduate Training Centre of Neuroscience

Methodological Frontiers in the Cognitive Neurosciences
PD Dr. Marc Himmelbach et al.
Graduate Training Centre of Neuroscience

Molecular Neurooncology and Neuro-Immunology
Prof. Dr. Ulrike Naumann, PD Dr. Markus Kowarik
Medical Faculty

Neurobiological Monday Seminar
Prof. Dr. Uwe Ilg
Medical Faculty

Neurocognitive disorders
Prof. Dr. Inga Liepelt-Scarfone
Faculty of Science (Psychology)

Neurohistology and -morphology
Block course of the Department of Cellular Neurology
Prof. Dr. Mathias Jucker
Graduate Training Centre of Neuroscience

Neurological Differential Diagnosis and Interactive Clinical Case Discussions
Prof. Dr. Tobias Freilinger
Medical Faculty

Neurological Examination Course
Prof. Dr. Thomas Gasser, Prof. Dr. Holger Lerche, Prof. Dr. Ulf Ziemann, Dr. Dr. Randolph Helfrich and staff
Medical Faculty

Neurological Palliative Care (QB13)
Dr. Vanessa Heinrich, PD Dr. Markus Kowarik, PD Dr. Markus Krumbholz, Dr. Annerose Mengel et al.
Medical Faculty

Seminars and Courses

(Summer Term/Winter Term)

Neurological Seminar
PD Dr. Kathrin Brockmann, PD Dr. Niels Focke, Prof. Dr. Tobias Freilinger, Prof. Dr. Alexander Grimm, PD Dr. Markus Kowarik, PD Dr. Markus Krumbholz, Dr. Ebba Lohmann, Dr. Annerose Mengel, PD Dr. Sven Poli, PD Dr. Mirjam Renovanz, Prof. Dr. Ludger Schöls, PD Dr. Rebecca Schüle, Prof. Dr. Matthis Synofzik, Prof. Dr. Dr. Ghazaleh Tabatabai, Prof. Dr. Daniel Weiß
Medical Faculty

Neurophysiology Seminars and De-Briefing of Practical Course
Dr. Ulrike Hedrich, Dr. Niklas Schwarz
(coordinator: Prof. Dr. Olga Garaschuk)
Medical Faculty

Oncolytic Viruses as Cancer Therapeutic Drugs
Prof. Dr. Ulrike Naumann
Medical Faculty

OSCE
PD Dr. Markus Krumbholz et al.
Medical Faculty

Practical Neurobiology
Prof. Dr. Ziad Hafed
Faculty of Science (Biology)

Project Module #4105: Assessment of RNA treatment against modified TDP-43 aggregation
Prof. Dr. Philipp Kahle
Faculty of Science (Cell Biology)

Retreat IZKF Promotionskolleg
Prof. Dr. Ulrike Naumann, Dr. Tanja Riess (Medical Faculty), Prof. Dr. Karin Schilbach (UKT)
Medical Faculty Neuroscience

Scientific Colloquium Neurology ("Wednesday Colloquium")
Prof. Dr. Matthis Synofzik
Medical Faculty

Sprache und Musik – Two Siblings in the Brain
Prof. Dr. Ingo Hertrich
General Linguistics (Philosophical Faculty) and Cognitive Science (Faculty of Science)

Structure & Plasticity of the Nervous System (BSc)
Prof. Dr. Andrea Burgalossi, Dr. Simone Mayer, Jun-Prof. Dr. Dr. Michela Deleidi
Faculty of Science (Biology)

Technical Didactics: Neuroscience in the Classroom
Prof. Dr. Uwe Ilg
Faculty of Science (Biology)

The Neurobiology of the Cerebellum
Prof. Dr. Peter Thier
Medical Faculty

Therapy Seminar of the Neurological Clinic
Prof. Dr. Holger Lerche, Prof. Dr. Ulf Ziemann, Prof. Dr. Thomas Gasser, PD Dr. Rebecca Schüle, Prof. Dr. Matthis Synofzik, Prof. Dr. Peter Thier, Prof. Dr. Dr. Ghazaleh Tabatabai, PD Dr. Kathrin Brockmann
Medical Faculty

Tübinger Lernportfolio Medizin
Dr. Ebba Lohmann, Dr. Annerose Mengel, Dr. Jonas Neher
Medical Faculty

TüRex project: Lymphozyten nach Antigenkontakt - Methoden zur Fixierung aktivierter Immunzellen
PD Dr. Markus Krumbholz
Medical Faculty

TüRex project: Motor Learning a pilot study
Prof. Dr. Uwe Ilg
Medical Faculty

TüRex project: Precision and reaction time of saccadic eye movements
Prof. Dr. Uwe Ilg
Medical Faculty

Videoseminar Movement Disorders
Prof. Dr. Ludger Schöls, PD Dr. Rebecca Schüle, Prof. Dr. Matthis Synofzik
Medical Faculty

Wa-wa-warum stottern wir manchmal? - The biological mechanisms of dysfluencies
Prof. Dr. Ingo Hertrich
General Linguistics (Philosophical Faculty) and Cognitive Science (Faculty of Science)

IMPRINT

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