



Research @ Department of Neurology

Dear Reader,

With this newsletter, we have the pleasure to give you insights into ongoing research activities at our Department and to portrait the people behind it. In addition, we would like to inform you about upcoming events, recent publications and open calls for proposals.

We hope you will enjoy reading it!

The Research Board of the Department of Neurology

November / December 2022

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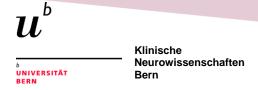
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Just Asking...



Dr.phil. Rahel Schumacher

What are your main research interest?

As a neuropsychologist, I am most fascinated by cognitive (dys)functions, but one particular topic – language – piqued my interest early on. I am especially interested not only in how/when/why language (or communication, more broadly) may be affected by brain damage and how it could be improved, but also in its relationships with other cognitive functions, such as attention or executive functions. Most recently, I also became interested in auditory processing abilities as a prerequisite for successful language processing – or as a possible cause for its breakdown.

Thus, one patient group of interest to me are stroke patients with or without aphasia. In my past and currently ongoing projects, I am improving the characterisation of stroke patients' behavioural patterns and associated brain damage. The neurorehabilitation unit of our department offers unique opportunities for such endeavours and these investigations are also supported by my collaborations with researchers from the Cognition and Brain Sciences Unit in Cambridge (UK) where I am a Visiting Scientist.

Despite the considerable effect language and communication problems can have on an individual's daily life and ability to participate in society, many topics – and potential avenues for improved assessment or additional therapeutic interventions – remain to be investigated.

What is your motivation to do research?

My motivation to do research is multi-faceted. As a clinician, patients always come first. Enhancing our understanding of their difficulties and thereby, ideally, being able to improve their outcomes is a very important driver. Crucially, patients are not only a source of motivation but also one of inspiration, as clinical observations can often trigger relevant research questions. Answering such questions then involves a vast range of different activities (reading, data collection & analysis, writing, etc.) which I much appreciate, alongside the opportunity to be creative and have the freedom to pursue thoughts, to get lost, to get back on track, or to decide to change track. Lastly, doing research means interacting with others, by working together to reach a goal, by exchanging ideas and learning from each other, often in an international context. Thus, being part of a research community is highly stimulating and rewarding, and is therefore another source of motivation and inspiration for me.

Rahel Schumacher is a senior psychologist and the Head of Inpatient Neuropsychology, Neurorehabilitation Unit, Department of Neurology Bern University Hospital and University of Bern. Contact: rahel.schumacher@insel.ch

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Congratulations

1) Opening of the Swiss Sleep House Bern

The Swiss Sleep House Bern officially opened its doors on 29 November 2022 with a festive event, attended by over 80 guests. The Sleep House is now open to anyone who is directly affected by sleep problems or who wants to learn more about sleep health.



Prof. Dr. med. Claudio L.A. Bassetti at the opening ceremony of the Swiss Sleep House Bern

About one-third of the population suffers from a sleep onset or sleep maintenance disorder, a sleep-related illness such as restless legs syndrome or sleep apnea. Often, those affected remain without a diagnosis and thus without treatment. The Insel Group wants to change this with the new Sleep House.

First point of contact for sleep problems

The interdisciplinary team of the Sleep House consists of specialists from the fields of psychology, psychiatry, neurology, and biology.







From left to right: Dr. rer. nat. Jonas Beck, Sylvia Schafer, Dr. phil. Antoine Urech, Barbara Waeber, Dr. med. Wolfgang Schmitt; Dr., phil. Simone Duss and Dr. rer. nat. Albrecht Forster (Co-Leaders of the Sleep House)

The Sleep House offers outpatient treatment: At the beginning there is a 5-minute sleep check questionnaire, then the sleep is analyzed, and a therapy concept is created. Patients can take the necessary equipment home with them and take the measurements themselves (home diagnostics concept).

If necessary, patients are referred for further analysis and treatment to the University Sleep-Wake-Epilepsy Center of the Inselspital or to the Pneumology Department of the Tiefenauspital, with which the Sleep House is affiliated. The Sleep House specializes in sleep onset and sleep maintenance disorders (insomnia), nightmare disorders, and circadian rhythm disorders, and works primarily with behavioral therapy rather than medications. An important focus is also the consultation of private persons and companies (shift work, company health management).

Further information: sleephouse.insel.ch

See also the press release of Insel Gruppe: Link

Written by Unum design, Regula Gerber; 06.12.22







2) Promotions



At the request of the Faculty of Medicine, the Executive Board of the University of Bern appoints

PD Dr. med. Tatiana Brémovà-Ertl

the habilitation, i.e. venia docendi.

3) Awarded Grants (in chronological order)



Schweizerische Herzstiftung



PD Dr. med. Olivier Scheidegger

Funding Institution: Germaine de Stael Grant; Schweizerische

Akademie der Technischen Wissenschaften

Link

Title: High-resolution magnetic resonance

fingerprinting for small neuromuscular

structures

Awarded Grant: CHF 4'500 per year, per group. Contributes to

strengthening the exchange with the project partners at the Institute Myologie in Paris (travel and accommodation costs for both

partners).



Prof. Dr. med. David Seiffge

Funding Institution: Swiss Heart Foundation Link

Title: Maximal medical treatment of intracerebral

haemorrhage pilot trial – MAX-ICH pilot trial

Co-applicant Prof. Dr. med. Werner Z'Graggen

Dr. med. Bernhard Siepen

Awarded Grant: CHF 86'300





4) Publication Highlights



Prof. Dr. med. Selma Aybek

The BMJ State of the Art

SIWF

Prof. Selma Aybek's article belongs to the BMJ's most-read clinical reviews among North American physicians providing an in-depth analysis of the latest medical knowledge.

It is one of the top 5 most read clinical reviews of BMJ of 2021. $\underline{\text{Link}}$

Aybek S, Perez DL. Diagnosis and management of functional neurological disorder. *BMJ*. 2022 Jan 24;376:o64. doi:10.1136/bmj.o64.

5) Successful degrees



Dr. med. univ. Michael Graber

Dr. Michael Graber has completed his **FMH neurology exam** with the highest grade. Dr.Graber was **this year's best graduate**.

6) Other Highlights



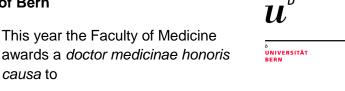
Prof. Dr. med. Adrian Guggisberg

The Neurorehabilitation Unit has been recognised by the SIWF as a further training centre in neurology category D2. Link





Dies academicus 2022 of the University of Bern





awards a doctor medicinae honoris causa to

Prof. M.D. Ph.D. Masashi Yanagisawa, Tsukuba, Japan.

Prof. Yanagisawa receives this honor in part for his continuing efforts to elucidate the mechanisms underlying sleep-wake regulation.

Prof. Yanagisawa and Dean Prof. Bassetti at the Dies academicus 2022.

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Call for Grants and Prizes

Internal Research Grants Department of Neurology:

Diversity and Excellence in Basic and Translational Research 2023



NEUROZENTRUM Neurochirurgie Neurologie Neurologie Neurologie Neuropadiatrie Neuropadiatrie Universitäte Psychiatrische Dienste Bern Psychiatrische

Focus of the grant: Basic and Translational Research/ PRT

Eligible for: Early-career Researchers of the Department of Neurology

- Aims at excellent trainees/ researchers with a medical background (before, during or maximum one year after their MD-PhD/ PhD), who wish to pursue an academic career in the Department of Neurology.
- Support in completing research project on a self-chosen topic in the field of basic and/ or translational Neurosciences at the Department of Neurology
- **Protected research** time will be awarded for a duration of a minimum of 3 and up to 12 months (part-time or full-time), depending on the planned research activity.
- Submission Deadline: 15 March 2023 Link

Diversity and Excellence in Clinical Research 2023



NEUROZENTRUM Neurocentre | Neurocentro Inselspital Universitätsspital Bern Universitäre Psychiatrische Dienste Bern

Focus of the grant: Clinical Research/ PRT

Eligible for: Early-career Clinicians of the Department of Neurology

- Aims at young clinicians/ residents (MD or Neuropsychologists) and senior clinicians/ senior registrars (only for substantiated reasons), who wish to pursue an academic career in the Department of Neurology.
- **Protected research** time will be awarded for a duration of a minimum of 3 and up to 12 months (part-time or full-time), depending on the planned research activity.
- Submission Deadline: 15 March 2023 Link





9th Congress EAN – Abstract Submission

The 9th annual congress of the European Academy of Neurology will be be held in Budapest on 1-4 July, 2023.

edn european academy of neurology

ean congress Budapest 2023

Programming Market Congress Supplementary Su

Other Open Calls for Proposals

DBMR Travel Grant

Deadline: rolling application throughout the year, as long as funding available Link

Forschungspreis Schweizerische Herzstiftung

Abstract Submission Deadline: 12 January 2023 Link

Deadline: 31 December 2022 Link

Epilepsie Liga: Promotionspreis
 Deadline: 31 December 2022 <u>Link</u>

• Epilepsie Liga: Forschungs-Förderungspreis

Deadline: 31 December 2022 Link

· Micheal Prize

Deadline: 31 December 2022 Link

9th Congress EAN: Abstract Submission

Deadline: 12 January 2023 Link

SSN: Publication Awards

Deadline: 15 January 2023 Link

sitem Insel-Support Fonds (SISF)
 Deadline: 15 January 2023 Link

SNSF Postdoc.Mobility

Deadline: 1 February 2023 Link

SNSF Starting Grants

Deadline: 1 February 2023 Link

ERC Consolidator Grant

Deadline: 2 February 2023 Link

UniBe Initiator Grant

Deadline: 22 February 2023 Link

UniBE Doc.Mobility

Deadline: 1 March 2023 Link

UniBE Short Travel Grants for (Post)Docs

Deadline: 1 March 2023 Link





Internal Research Grant: Diversity and Excellence in Basic and Translational Research 2023
 Deadline: 15 March 2023 Link

Internal Research Grant: Diversity and Excellence in Clinical Research 2023
 Deadline: 15 March 2023 Link

Johanna Dürmüller-Bol DBMR Research Award 2023
 Deadline: 20 March 2023 Link

EAN Student Teaser Fellowship
 Deadline: 31 March 2023 Link

SNSF Sinergia

Deadline: 17 April 2023 Link

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Support

1) Support

Training for PhD Supervisors





The two-day block course "Training for PhD Supervisors" addresses the goals, challenges and content of good supervision of PhD students. The course participants are given the opportunity to reflect on their own role as supervisors.

The block course is aimed at all persons at the University of Bern who are authorized to supervise doctoral students.

The block course will be offered in February 2023 and June 2023 with identical content:

- **1 2 February 2023** (9:00 17:00)
- **7 8 June 2023** (9:00 17:00)

The course will take place in the main building of the university, in **room 028**. *Participation is free of charge for employees of the University of Bern/Inselspital*.

Information and registration: Link

Scientific Writing with SciFlow

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The University Library of Bern has licensed SciFlow for the entire university campus. With SciFlow, scientific texts can be written alone or in a group and easily formatted for a specific journal or as a student paper. You can use the reference manager of your choice with it so that all sources can be accessed directly in SciFlow.



To use SciFlow's services, UniBE students and staff can go to sciflow.net and register with their unibe.ch email address and create an account.

More information on SciFlow and the registration process: Link





Transferable Skills Program for (Post)Docs

Transferable skills are competencies acquired in one context that can be applied to other contexts, jobs, position or fields of work. A goal of this program is to help postdocs advance in their academic career.

Thus, the courses offered also give postdocs the chance to further develop relevant skills and enhance their professional profile. The course program is free of charge for postdocs and doctoral candidates of the University of Bern/ Inselspital.

Information and course program: Link



2) Trainings and Workshop

CTU Trainings:

a) Clinical Investigators I/II: Basic/ Advanced GCP & clinical research training

The course is designed to introduce basic concepts of patient-oriented clinical research to health care professionals involved in the recruitment of study participants. It is split in two parts. The first part consists of self-learning and home-based exercises. For the second part, participants will attend the lectures and workshops.

Next Course Dates 2023 Clinical Investigators I: <u>Link and Registration</u> Next Course Dates 2023 Clinical Investigators II: <u>Link and Registration</u>

Next Course Dates 2023 GCP Refresher for Clinical Research: Link and Registration

b) The Clinical Study Protocol Basics

The study protocol is the basis of any clinical investigation and a key factor in the success of the trial. This half-day course is a very condensed version of the former "Writing a clinical trial protocol"-course.

Next Course Dates 2023: Link and Registration





c) Stata Training

In this workshop we will learn how to do statistical inference with Stata. Basic statistical methods for the analysis of continuous, binary, count and time-to-event data will be covered, e.g. linear and logistic regression, or Cox proportional hazard models.

Introduction to Stata: Course dates 2023: Link and Registration

Statistics Using Stata: Course dates 2023: Link and Registration

d) REDCap Database Implementation

The course will give an introduction to the Clinical Data Management

System REDCap and is designed for persons who plan to set up their own study in REDCap.

Additionally useful tips regarding the design of Case Reports Forms (CRFs) are provided. After the course researchers will be able to set up their own database in REDCap.

Next course dates 2023: Link and Registration

For other CTU Trainings and Courses, check the CTU website here.

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Equal Opportunities

If you come across interesting news and/ or would like to read about a specific topic related to gender equality and diversity, please let us know (chantal.kottler@insel.ch).

Department of Neurology: Internal Survey on Equal Opportunities and Diversity

With an anonymous survey the <u>Equal Opportunities Board</u> (EOB) would like to record the status regarding equal opportunities and diversity at the Department of Neurology in order to identify goals and priorities for further actions. The survey will take 3 minutes to complete and will be repeated annually as a monitoring tool.

All members of the Department are invited to complete the survey *until 31.12.2022*. The EOB will make sure that results will be presented in a way that does not allow individual backtracking and hence negative consequences.

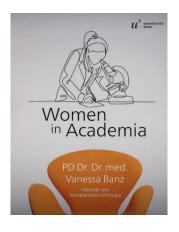
Find the survey here: Equal opportunities Neurologie Inselspital (google.com)

Thank you for your valued support!

Women in Academia

On the website of the Faculty of Medicine you will find interesting interviews on "Women in Academia". Prof. Dr. med. Annalisa Berzigotti, Prof. Dr. med. Katja Odening und PD Dr. med. Dr. phil. Vanessa Banz answer questions on why they chose a career in academia, or how they manage to keep a positive life-work balance.

For all the interviews visit the <u>website</u>.



Recommended by the Equal Opportunities Board: Saying 'no' in science isn't enough

A group of female scholar wrote an article about their experience of saying "no" over a whole year. They realized how much time they had lost by saying no to work that didn't move their careers forward. This realization led to four female professors forming the No Club.



For the full career column in *Nature* visit the <u>website</u>.

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Recent Publications

Neuroimmunology

- 1) **Hoepner R**, et al. Feelings of loneliness, COVID-19-specific-health anxiety and depressive symptoms during the first COVID-19 wave in Swiss persons with multiple sclerosis. *Sci Rep.* 2022 Oct 24;12(1):17829. doi:10.1038/s41598-022-22445-0.
- 2) Lutfullin I, (...) **Salmen A**, et al. Association of obesity with disease outcome in multiple sclerosis. *J Neurol Neurosurg Psychiatry*. 2023 Jan;94(1):57-61. doi:10.1136/jnnp-2022-329685.
- Rebsamen M, Friedli C, Radojewski P, Diem L, Chan A, Wiest R, Salmen A, Rummel C, Hoepner R. Multiple sclerosis as a model to investigate SARS-CoV-2 effect on brain atrophy. CNS Neurosci Ther. 2022 Dec 7. doi:10.1111/cns.14050.
- 4) Runge AK, Remlinger J, (...) Salmen A. Retinal layer segmentation in a cohort of healthy children via optical coherence tomography. *PLoS One. 2022 Nov 3;17(11):e0276958*. doi:10.1371/journal.pone.0276958.
- 5) Sanak L, **Kamm CP, Chan A**, et al. Factors associated with material deprivation in persons with multiple sclerosis in Switzerland: Cross-sectional data from the Swiss Multiple Sclerosis Registry. *Mult Scler Relat Disord*. 2022 Dec 5;69:104438. doi:10.1016/j.msard.2022.104438.
- 6) Schwarzwald A, Salmen A, Betancourt AXL, Diem L, Hammer H, Radojewski P, Rebsamen M, Kamber N, Chan A, Hoepner R, Friedli C. Anti-neurochondrin antibody as a biomarker in primary autoimmune cerebellar ataxia-a case report and review of the literature. *Eur J Neurol.* 2022 Nov 27. doi:10.1111/ene.15648.
- 7) Wiendl H, (...) **Chan A**, et al. Specific Patterns of Immune Cell Dynamics May Explain the Early Onset and Prolonged Efficacy of Cladribine Tablets: A MAGNIFY-MS Substudy. *Neurol Neuroimmunol Neuroinflamm*. 2022 Nov 21;10(1):e200048. doi:10.1212/NXI.0000000000000000000048.

Stroke

- Fang T, (...) Antonenko K, Heldner MR, et al. Characteristics and outcomes of postpartum cerebral venous sinus thrombosis: A subgroup analysis of the ACTION-CVT study. J Stroke Cerebrovasc Dis. 2022 Dec;31(12):106865. doi:10.1016/j.jstrokecerebrovasdis.2022.106865.
- 2) **Gallucci L**, **Umarova RM**. Association of cognitive reserve with stroke outcome: a protocol for a systematic review. *BMJ Open. 2022 Jul 8;12(7):e059378*. doi:10.1136/bmjopen-2021-059378.
- 3) Nowacki A, Zhang D, Barlatey S, Ai-Schläppi J, **Rosner J, Arnold M**, Pollo C. Deep Brain Stimulation of the Central Lateral and Ventral Posterior Thalamus for Central Poststroke Pain Syndrome: Preliminary Experience. *Neuromodulation*. 2022 Oct 17;S1094-7159(22)01268-5. doi:10.1016/j.neurom.2022.09.005.





- 4) Marto JP (...), M Beyeler, M Arnold et al. Safety and Outcome of Revascularization Treatment in Patients With Acute Ischemic Stroke and COVID-19: The Global COVID-19 Stroke Registry. Neurology. 2022 Nov 9;10.1212/WNL.0000000000201537. doi:10.1212/WNL.000000000000201537.
- Mujanovic A, Jungi N, Kurmann CC, Dobrocky T, Meinel TR, Almiri W, Grunder L, Beyeler M, Lang MF, Jung S, Klail T, Hoffmann A, Seiffge DJ, Heldner MR, Pilgram-Pastor S, Mordasini P, Arnold M, Piechowiak EI, Gralla J, Fischer U, Kaesmacher J. Importance of Delayed Reperfusions in Patients With Incomplete Thrombectomy. Stroke. 2022 Nov;53(11):3350-3358. doi:10.1161/STROKEAHA.122.040063.
- 6) **Sperber C, Gallucci L, Umarova R**. The low dimensionality of post-stroke cognitive deficits: it's the lesion anatomy! *Brain*. 2022 Nov 21;awac443. doi:10.1093/brain/awac443.
- 7) van Laarhoven CJHCM, **Arnold M**, Danilova M, Dreval M, Ferrari E, Simonetti BG, Gralla J, **Heldner M**, Kalashnikova L, Mancuso M, Metso TM, Steinsiepe VK, Strbian D, Tatlisumak T, de Kleijn DPV, de Borst GJ. Delayed Development of Aneurysmal Dilatations in Patients with Extracranial Carotid Artery Dissections. *Eur J Vasc Endovasc Surg.* 2022 Dec;64(6):595-601. doi:10.1016/j.ejvs.2022.08.010.

ZfPB

- 1) Chevrier E, (...) **Krack P**, et al. Maladaptive One-Leg Balance Control in Parkinson's Disease. *Parkinson's Disease. Symmetry 2022,14*. doi:10.3390sym14122511.
- 2) Nordenström S, **Petermann K, Debove I**, Nowacki A, **Krack P**, Pollo C, Nguyen TAK. Programming of subthalamic nucleus deep brain stimulation for Parkinson's disease with sweet spot-guided parameter suggestions. *Front Hum Neurosci. 2022 Nov 1;16:925283*. doi:10.3389/fnhum.2022.925283.
- Svihlik J, (...) Sousa M, Krack P, (...) Rusz J. Long-Term Averaged Spectrum Descriptors of Dysarthria in Patients With Parkinson's Disease Treated With Subthalamic Nucleus Deep Brain Stimulation. J Speech Lang Hear Res. 2022 Dec 12;65(12):4690-4699. doi:10.1044/2022 JSLHR-22-00308.
- 4) Pinto S, (...) Krack P, (...) Schüpbach M, Deuschl G; EARLYSTIM Study Group. Results of a Randomized Clinical Trial of Speech after Early Neurostimulation in Parkinson's Disease. Mov Disord. 2022 Dec 3. doi:10.1002/mds.29282.

Neuromuscular Center

- 1) **Dietmann A**, von Martial R, **Scheidegger O**. Spontaneous ischemic neuropathy of the sciatic nerve due to arterial occlusion a rare cause of acute neuropathy not to be missed, a report of two cases. *BMC Neurol*. 2022 Nov 4;22(1):410. doi:10.1186/s12883-022-02944-3.
- 2) Hess H, Herren M, Gerber N, **Scheidegger O**, et al. Automatic quantification of fatty infiltration of the supraspinatus from MRI. *EPiC Series in Health Sciences*, vol 5, pages 107—110. doi:10.29007/xq8m.





Headache

 Gossrau G, Schankin CJ, et al. Konsensusstatement der Migräne- und Kopfschmerzgesellschaften (DMKG, ÖKSG & SKG) zur Therapiedauer der medikamentösen Migräneprophylaxe. Schmerz. 2022 Oct 26;1-11. doi:10.1007/s00482-022-00671-9.

Neurorehabilitation

1) **Schumacher R**, et al. Attention to attention in aphasia - elucidating impairment patterns, modality differences and neural correlates. *Neuropsychologia*. 2022 Dec 15;177:108413. doi:10.1016/j.neuropsychologia.2022.108413.

Psychosomatic Medicine

 Weber S, Bühler J, Vanini G, Loukas S, Bruckmaier R, Aybek S. Identification of biopsychological trait markers in functional neurological disorders. *Brain*. 2022 Nov 23;awac442. doi:10.1093/brain/awac442.

Schwindel- und Ganglabor

 Nadesalingam N, (...) Kerkeni H, Kalla R, Walther S. The Behavioral Mapping of Psychomotor Slowing in Psychosis Demonstrates Heterogeneity Among Patients Suggesting Distinct Pathobiology. Schizophr Bull. 2022 Nov 22;sbac170. doi:10.1093/schbul/sbac170.

SWEZ

 Cronemberger Andrade A, Schreier DR, Barea-Moya L, Ribeiro Faustino P. The first European Academy of Neurology (EAN) Science School: shaping the next generation of translational neurologists. Eur J Neurol. 2022 Oct 26. doi:10.1111/ene.15614.

Zentrum für Seh- und Wahrnehmungsstörungen

 Dysli M, Abegg M, Kerkeni H, Kalla R, Tappeiner C. Unilateral corneal arcus and conjunctival vessel alterations in cranial autonomic dysregulation: A case report. *Eur J Ophthalmol.* 2022 Nov 3;11206721221136426. doi:10.1177/11206721221136426.

Zentrum für Seltene Krankheiten

 Martakis K, (...) Bremova-Ertl T. Efficacy and Safety of N-Acetyl-L-Leucine in Children and Adults With GM2 Gangliosidoses. *Neurology*. 2022 Dec 1;10.1212/WNL.0000000000201660. doi:10.1212/WNL.00000000000201660.

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Dear Reader

This is the last research newsletter of 2022. We wish you a wonderful Christmas season and a happy New Year! – The next research newsletter will be published by the end of February 2023.

Contact

For any comments on the newsletter as well as all research related questions, please contact:

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