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

January / February 2022

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Just Asking…

Marc Grau Leguia, PhD

What are your main research interest?

My research focuses on the analysis and modeling of the seizure occurrences from subjects with focal epilepsy. Being a physicist by training, I am also very interested in the study of dynamical and complex systems. As a matter of fact, using such models has been demonstrated to be key to understanding more about how the ictal transition occurs.

Here in Bern, as a postdoc in the e-lab, I am studying the different timescales in which seizures occur for patients of focal epilepsy. I had the opportunity to analyze a cohort consisting of N=256 of subjects with refractory focal epilepsy implanted with a neurostimulation device (NeuroPace Inc) for a median of more than 9 years. Using this dataset, we have shown that seizure cycles fluctuate at a very different timescales (from hours to years). Another important result we found analyzing this cohort is that circadian and multidien (variation between 4-45 days) seizure cycles are highly prevalent and equally strong. Interestingly, these multidien cycles do not depend on external cues such as the working week, the calendar month or the lunar cycle. Using the results we had on that the seizure cycles vary from 4-45 days, we are developing statistical models that forecast the seizure risk of a subject in a 24-hour horizon. More specifically, we are currently using statistical and machine learning models to be able to forecast seizures to subjects previously unseen from the algorithms. Hence, making a general model for seizure prediction to focal epilepsy subjects.

What is your motivation to do research?

One of the main drives that motivates throughout my research is plain curiosity and the possibility that the things that I study may be able to make an impact on society. Furthermore, I like to bridge the gap between different scientific communities. I am myself coming from a physicist community and being able to speak to experts in biology and medicine on a daily basis is a quite enriching endeavor that motivates me to learn new things.

Marc Grau Leguia is a Wyss Center fellow and a postdoctoral researcher at the Sleep-Wake-Epilepsy Center, Center for Experimental Neurology, NeuroTec, Department of Neurology, Inselspital Bern, University Hospital, University of Bern, Switzerland.

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Congratulations

1) **Awarded Grants** *(in chronological order)*

**Dr. med. David Schreier**

*Funding Institution:* EAN Clinical Fellowship 2022 ([Link](#))

*Host Institution:* Sleep-Wake Center chaired by Prof. Gert Jan Lammers, Leiden University (NL)

*Awarded Grant:* EUR 425 per week (11 weeks)

**PD Dr. med. David J. Seiffge**

*Funding Institution:* Portola/Alexion ([Link](#))

*Title:* Swiss ICH imaging cohort. Influence of different types of oral anticoagulants on baseline haematoma volume, secondary haematoma expansion and outcome of intracerebral haemorrhage

*Awarded Grant:* CHF 75’000

**Dr. med. Jan Rosner**

*Funding Institution:* International Foundation for Research in Paraplegia ([Link](#))

*Title:* Novel Biomarkers and Peripheral Therapeutic Targets for Neuropathic Pain after SCI

*Host Institution:* Danish Pain Research Center, Aarhus University, Denmark (Prof. Finnerup)

*Awarded Grant:* CHF 80’000 (Post-Doc Fellowship, 12 months)
Funding Institution: Biogen (Link)

Title: Prediction of non-motor symptoms in fully ambulatory MS patients using vocal biomarkers

Cooperating Partner: AudEERING (Link)

Awarded Grant: Total CHF 95'000; share Hammer/Hoepner: CHF 48’500

(2) Prizes

Laura Facchin, MSc. Prof. Claudio L. Bassetti Prof. Antoine Adamantidis
First Author Co-Author Last Author

Have received the Forschungspreis der Schweizerischen Hirnliga 2022 (Link) for their publication:

Slow Waves Promote Sleep-Dependent Plasticity and Functional Recovery after Stroke (doi:10.1523/JNEUROSCI.0373-20.2020)
PD Dr. med. Mirjam Heldner  
Co-Author

Prof. Dr. med. Marcel Arnold  
Co-Author

Have received the **Paul Dudley White International Scholar Award** awarded by the **American Heart Association** for their publication:

*Age-stratified Risk of Cerebral Venous Sinus Thrombosis after SARS-CoV-2 Vaccination*  
(doi:10.1212/WNL.0000000000013148)

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Dr. med. Jan Rosner

Has received the **Eberhard Ketz Prize** awarded by the **Pro Humanis – Gönnervereinigung Neurorehabilitation Zihlschlacht** ([Link](#)) for «besondere wissenschaftliche Leistungen im Bereich der Neurorehabilitation und neurologischen Schmerzforschung»
(3) Appointments

PD Dr. med. Anke Salmen has been appointed a member of the Editorial Board of Frontiers in Neurology - Multiple Sclerosis and Neuroimmunology.

(4) Highlights in Teaching

Prof. Dr. med. Simon Jung Prof. Dr. med. Urs Fischer

Start of the MAS in Stroke Medicine

The Faculty of Medicine of the University of Bern and the Stroke Center at the University Hospital Bern developed the European Stroke Master programme in close collaboration with the European Stroke Organisation (ESO) to train the next generation of clinicians and researchers in stroke care throughout Europe.

Media Release Insel and UniBE

Link to the MAS
Call for Grants and Prizes

**Johanna Dürmüller-Bol DBMR Research Award 2022**

- **Focus of the grant:** Research Award; Basic and clinical research
- **Eligible for:** MD, PhD, MD-PhD before habilitation

- The Johanna Dürmüller-Bol DBMR Research Award supports a young researcher of the Faculty of Medicine to lead a promising research project and gather data for pursuing an application for a peer reviewed, competitive grant.

- **Who can apply:** MD, PhD, or MD-PhD researchers of the Faculty of Medicine, who hold the title of Postdoctoral Fellow, Instructor or Research Associate, or who are under the direct supervision of a mentor. Lab Group Leaders and researchers who have received the habilitation are not eligible.

- The award is of CHF 30'000; The winner will be invited to present the project at the Day of Biomedical Research, which is planned for July 6, 2022.

- **Submission Deadline:** 14 March 2022 [Link](#)

**SNF Project Funding**

- **Focus of the grant:** Project Funding; Basic and Clinical Research
- **Eligible for:** Young (Postdoc) and Advanced Researchers

- With its project funding scheme, the SNF enables researchers to independently conduct research projects with topics and goals of their own choice.

- Applicants can apply for funding of research costs and staff salaries, as well as of scientific cooperation, networking and communication; however, they may not apply for their own salaries.

- The funding period ranges from one to four years, with grants starting at CHF 50,000 (minimum amount). The SNF recommends that researchers focus on one project and plan it for a four-year period.

- **Submission Deadline:** 1 April 2022 [Link](#)
Baasch-Medicus Foundation Research Grant

**Focus of the grant:** Protected Research Time for Young Researchers/ Clinicians

**Eligible for:** Clinicians/ MD with or shortly before receiving FMH title

- The Baasch-Medicus Foundation aims to acknowledge and support outstanding achievements in neurology and funds innovative research in the field.

- The grant aims to complement a partial clinical employment on a fifty-fifty bases: 50% Baasch-Medicus Foundation and 50% clinical engagement at the home institution.

- Emphasis on research in clinical neurology. The applicant is certified specialist in neurology or is currently receiving his clinical specialty training in neurology, and is pursuing an academic career

- **Submission Deadline: 30 June 2022** [Link]

**Other Open Calls for Proposals**

- **Johanna Dürmüller-Bol DBMR Research Award 2022**
  Deadline: 14 March 2022 [Link]

- **Internal Research Grant: Diversity and Excellence in Basic and Translational Research 2022**
  Deadline: 15 March 2022 [Link]

- **Internal Research Grant: Diversity and Excellence in Clinical Research 2022**
  Deadline: 15 March 2022 [Link]

- **Internal Education Grant: Stipendium für professionelle Lehre in der klinischen Neurologie**
  Deadline: 15 March 2022 [Link]

- **Stern-Gattiker-Preis**
  Deadline: 25 March 2022 [Link]

- **Theodor-Kocher-Preis**
  Deadline: 31 March 2022 [Link]

- **SNF Project Funding**
  Deadline: 1 April 2022 [Link]
- FreeNovation 2022  
  Deadline: 16 April 2022 [Link]

- UniBE Promotion Fund  
  Deadline: 21 April 2022 [Link]

- SNF Research Equipment (R’Equip)  
  Deadline: 2 May 2022 [Link]

- UniBern Forschungsstiftung  
  Deadline: 2 May 2022 [Link]

- SNF Sinergia  
  Deadline: 16 May 2022 [Link]

- Insel Gruppe: Nachwuchsförderungsgrant  
  Deadline: 31 May 2022 [Link]  
  Internal Deadline Research Board: 15 May 2022

- SNG Scholarship 2022  
  Deadline: 31 May 2022 [Link]

- SNG Prize 2022  
  Deadline: 31 May 2022 [Link]

- Baasch-Medicus-Foundation  
  Deadline: 30 June 2022 [Link]

- UniBern ID Grants  
  Deadline: 28 August 2022 [Link]
Important Dates

- 3rd Sleep Science Winter School, 3 – 4 March 2022, Virtual Event [Link]
- EAN Annual Congress, 25 - 28 June 2022, Vienna, Austria [Link]
- SNG Academy 2022, 30 June – 2 July 2022, Inselspital Bern [Link]
- ICTALS 2022, *the tipping point*, 4 – 8 July 2022, University of Bern, Registration closes on 30 April 2022 [Link]

For further events of the Department, please check our [website].
Support

1) New scheme: SNSF Consolidator Grants 2022

On behalf of the Swiss government, the Swiss National Science Foundation (SNSF) is launching the *SNSF Consolidator Grants 2022* call on 1 March 2022. Recipients of an SNSF Consolidator Grant will be able to conduct their research in Switzerland and consolidate their scientific independence. At the time of applying for an SNSF Consolidator Grant 2022, researchers must have a PhD or equivalent qualification awarded no less than 7 and no more than 12 years ago. In addition, they must have conducted independent research and made contributions to science without the involvement of their thesis supervisor.

Switzerland's association to Horizon Europe remains the stated objective of the Federal Council. Despite the various measures launched by the SNSF on behalf of the Swiss government, the SNSF is hoping for Switzerland's rapid and full association to the Horizon Europe program.

[Link](#)

2) Stick to Science: An online signature campaign for an open and inclusive European Research Area

- The *Stick to Science* initiative has been set up by the European research community calling for open and barrier-free collaboration among Europe’s research and innovation (R&I) actors, who share the same values.

- This initiative is an active response to the delayed progression of association agreements with Switzerland and the United Kingdom, held up by political barriers that have nothing to do with science.

- The campaign was set in motion and funded by five co-initiator institutions: ETH Zurich, EPF Lausanne, ETH Board, Universities UK, the umbrella organization of 140 UK universities, and the Wellcome Trust.

- Visit the [dedicated website](#) to show your support.
3) Reminder: Open Access Publication Fund at the University of Bern

- The OA fund of the University of Bern has been supporting its researchers' OA gold publications since 2020. As of 2022 and until 2024, the University of Bern participates in the national OA Fond initiative of swissuniversities which means that the overall volume of the fund has increased.

- *What will be funded?* Article Processing Charges (APCs) for peer-reviewed journal articles in a pure open access gold journal. Maximum amount of APC is 2'500 CHF

- *Who is eligible to apply?* Teaching and/or research staff employed by the University of Bern; lecturers (DozentInnen), assistants (AssistentInnen) and doctoral candidates employed by the University of Bern, as well as employees of the Insel-Spital provided they have a university campus account (doctoral candidates and higher)

- [Link](#)

4) Trainings and Workshop

**CTU Trainings:**

**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. After the course researchers will be able to set up their own database in REDCap. Target audience: Clinical Researchers, Study Nurses and all persons who would like to set up their own study in REDCap.

**Next Training Dates 2022:** [Link and Registration](#)
Introduction to STATA

In this workshop we will learn how to use Stata step-by-step: the looks, basics, data import/export, labelling/formatting, data manipulation, good practices, help, and essential statistics. The course is open for clinical researchers of the Inselspital Bern and the staff of the Medical Faculty of the University of Bern. It's not available for external participants.

Students need to attend on two half-days:

- Tuesday, **8 + 15 March 2022**, 13:00 - 17:00
- Cost: CHF 30.- for staff of the Inselspital, Bern University hospital and the University of Bern
- [Link and Registration](#)

For other CTU Trainings and Courses, check the CTU website [here](#).
Gender Equality and Diversity

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).

COMET Career Program

The University of Bern’s career program is part of the strategy for 2021 of the University of Bern. The career program COMET will support female researchers in successfully pursuing their academic careers; by means of an individually customized program the participants enhance their skills, know-how and motivation.

The next round of COMET will start in spring 2022. Each year, there are 20 places available which are allotted competitively. Coaching, mentoring and trainings can be held in German and/or English, according to the participants’ needs.

**Deadline for Applications**: 15 March 2022

[Link](#)

Podcast “Geteilte Führung in der Medizin – ein Zukunftsmodell?”

The podcast discusses the possibility of shared or part-time executive positions in medicine, especially in university hospitals. Joining the discussion are representatives from the university hospitals of Bern and Zurich, as well as from the Offices of Gender Equality from the Universities of Bern and Zurich.

[Link](#)

Course Program 2022 Office of Gender Equality

The Office for Gender Equality offers courses as an addition to the continuing education opportunities of the university and the canton. Some courses are aimed at women, others are open to all genders. [Link](#)

[Link](#)

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Recent Publications

Stroke


Neuroimmunology


SWEZ


**Neuropsychology**


**ZfPB**


**Neurorehabilitation**


Psychosomatic Medicine

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

Neuromuscular Center


NeuroTec