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 2021

Content

Just Asking…
Congratulations
Calls for Grants and Prizes
Important Dates
Support
Gender Equality and Diversity
Recent Publications
Contact
Dr. Carolina Gutierrez Herrera

What are your main research interest?

My main research interest focuses on how neurons and glial cells interact, how they form circuits to modulate cognition and sleep-dependent processes. Sleep has been described in many species ranging from hydrids to humans, and it is tightly associated with brain and body physiology that are essential for the survival and well-being of the organism. Yet, the cellular basis underlying sleep control and its functions remain elusive and a matter of intense debate.

In this context, my recent research projects have identified neuronal circuits controlling eye-movement during rapid-eye movement sleep (or dreaming) and the mechanisms of spindles, a sleep rhythm important for sleep stability and sleep-dependent memory consolidation. From these advances, my ongoing research projects aim at understanding of the role of glial cells in brain dynamics supporting cognition and sleep, in particular in neurological and neuropsychiatric disorders. Particularly, the link between sleep, in particular sleep oscillations, with neurological (e.g. thalamic strokes) and neuropsychiatric disorders such as mood disorders and schizophrenia.

What is your motivation to do research?

My motivations are both scientific and personal. My scientific motivation is to learn about the neuronal-glial coding of behaviours and its role in plasticity, especially in regards to brain disorders, with the goal that this knowledge will translate into novel targets and therapeutic avenues for novel treatments of neurological and neuropsychiatry disorders including cognitive and mood disorders. In Bern, I have the privilege to be part of very active and interdisciplinary network of neuroscientists and clinicians that aim at bridging experimental, translational and clinical research on the mechanisms of brain disorders including sleep, stroke, or schizophrenia and depression. This is a unique environment that allow direct interactions translations of results from basic research.

On the personal side, my international career has faced many challenges related to gender equity and minorities, yet it has been a rich and insightful path. The training, mentorship
and collaborations with outstanding scientists in Mexico (Prof A Darzon and Prof CTrevino), the United States of America (Prof P Lammers and Prof E Serrano), Canada (Profs M Colicos, R Thomson, J Bains, B Stell, JC Lacaille, R. Robitaille, A Adamantidis) and now in Switzerland (Dr. Markus Schmidt, Profs C. Bassetti, C. Nissen, W. Strik, K. Do and M. Celio) not only represent a strong drive for science and discovery, but they have also ignited my motivation to support young scientists in developing their research projects using state-of-the-art techniques in an interdisciplinary and international context and vision.


Dr. Carolina Gutierrez Herrera is a Principal Investigator at the Zentrum für Experimentelle Neurologie (ZEN), at the Department of Neurology, Inselspital, Bern University Hospital and the Department for BioMedical Research (DBMR), University of Bern, Switzerland.

Contact: carolina.gutierrez@dbmr.unibe.ch

back
Congratulations

(1) Promotions

Fabian Balsiger, PhD

has successfully completed his PhD with “summa cum laude” at the Graduate School for Cellular and Biomedical Sciences of the University of Bern.

(2) Awarded Grants

PD Dr. med. Mirjam Heldner (Main Applicant)

Funding Institution: sitem-Insel Support Funds (SIFS) (Link)
Title: BISS – Bernese Intracranial Stenosis Study
Awarded Grant: CHF 70'000

Prof. Dr. phil. nat. Smita Saxena (Main Applicant)

Funding Institution: Synapsis Foundation (Link)
Title: Sleep as an opportunistic window for memory improvements in AD/FTD/FT-ALS
Co-Applicant: Prof. Antoine Adamantidis
Awarded Grant: CHF 257’280
Prof. Dr. phil. nat. Smita Saxena (Main Applicant)

Funding Institution: Innomedica (Link)

Title: Efficacy of compound TLN in ALS - 2nd pilot study

Awarded Grant: CHF 100’000

Prof. Dr. med. Claudio L. Bassetti and his group:

Dr.med. Irina Filchenko
Dr.med. Martijn Dekkers
Dr.med. Markus Schmidt
Dr.phil. Simone Duss

Funding Institution: European Stroke Research Foundation – esrf (Link)

Title: The role of sleep in the evolution of cognitive functioning after thalamic and basal ganglia stroke

Awarded Grant: EUR 47’328
(3) Awarded Prizes

Prof. Dr. med. Claudio L. Bassetti
Prof. Bassetti has been awarded the Gheorgu Marinescu Medal by the Romanian Neurological Society.

Dr. med. Maxime Baud
(together with Dr. Timothée Priox, University of Geneva)
has been awarded the Alfred-Hauptmann-Prize for Epilepsy Research 2021 of the Swiss League against Epilepsy (Link) for the Priox et al. paper in Lancet Neurology (see below). The prize sum amounts to EUR 10’000.
Outstanding Publications

Dr. med. Maxime Baud (Last Author)

Epilepsy ‘weather forecasts’ could let patients plan lives around fluctuations in seizure risk

Publication details

Media Release Insel Gruppe
Media Release UniBE
Media Release Eurek Alert UC San Francisco
Other Highlights

- Newsweek ranks the leading hospitals in 21 countries and the world’s best specialized hospitals.

- The Department of Neurology has been listed as one of the world’s best specialized hospitals 2021.

- [Link](#)
Call for Grants and Prizes

CTU Research Grants

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<tr>
<th>Focus of the grant:</th>
<th>Clinical research; Protected Research Time; salary for doctoral students or study nurses</th>
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<tr>
<td>Eligible for:</td>
<td>Young researchers</td>
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- Aim at excellent MD’s, doing clinical research at Insel Gruppe.
- Applicants must have an employment of at least one year at Insel Gruppe, be under the age of 40 and have no habilitation yet.
- Funding entails a maximum of CHF 80’000 staff salary and a maximum of CHF 8’000 for consumables.
- Funding can be used for protected research time of the applicants, or as staff salary for doctoral students and/ or study nurses.

- **Submission Deadline at DLF:** 31 March 2021 [Link](#)

SNF Project Funding

<table>
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<th>Focus of the grant:</th>
<th>Basic and clinical research</th>
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<tr>
<td>Eligible for:</td>
<td>Advanced researchers</td>
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- 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 (not their own salary), as well as of scientific cooperation, networking and communication.
- 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.
- Applicants with a doctorate must have obtained the latter four years before the submission date of the application. Applicants without a doctorate must generally have completed three years of research work as their main source of income.

- **Submission Deadline:** 1 April 2021, 17:00 [Link](#)
UniBE ID Grants

Focus of the grant: Basic and clinical research/ interdisciplinary research
Eligible for: Advanced researchers

- As a means to promote interdisciplinary research the University of Bern is inviting applications for interdisciplinarity grants.
- With "UniBE ID Grants" as start-up financing, leaders of research groups should be better able to prepare for applications to national and international programs (typically SNF Synergia or ERC Synergy).
- The sum pledged for each application is generally between CHF 75'000 and 150'000.
- Submission Deadline: 29 August 2021 [Link]

Other Open Calls for Proposals

- **Bridge Scholarship in Translational Research in Neurology**
  Deadline: 28 February 2021 [Link]

- **Excellence in Diversity Fellowship**
  Deadline: 28 February 2021 [Link]

- **Research Grant in Neurology**
  Deadline: 28 February 2021 [Link]

- **UniBE Doc.Mobility**
  Deadline: 1 March 2021 [Link]

- **UniBE 120%-Care Grant**
  Deadline: 1 March 2021 [Link]

- **Foundation for Laboratory Medicine**
  Deadline: 1 March 2021 [Link]

- **BRIDGE Discovery**
  Deadline: 1 March 2021 (Letter of Intent); Deadline: 17 May 2021; 17:00 [Link]

- **JPND Research – EU Joint Programme – Neurodegenerative Disease Research**
  Deadline pre-proposal: 2 March 2021; Deadline proposal: 29 June 2021 [Link]
• **ERA-NET Neuron: Call for Proposals for Transnational Research Projects on Neurodevelopmental Disorders**
  Deadline for pre-proposal: 9 March 2021 [Link](#)

• **CTU-Forschungs-Grants**
  Deadline: 31 March 2021; internal deadline Research Board: 15 March 2021 [Link](#)

• **SNF Project Funding**
  Deadline: 1 April 2021 [Link](#)

• **UniBE Promotion Fund**
  Deadline: 13 April 2021 [Link](#)

• **Berne University Research Foundation**
  Deadline: 26 April 2021 [Link](#)

• **SNF R’Equip**
  Deadline: 2 May 2021 [Link](#)

• **De Barjac Prize**
  Deadline: 1 June 2021 [Link](#)

• **SNG Scholarship 2021**
  Deadline: 31 July 2021 [Link](#)

• **SNG Prize 2021**
  Deadline: 31 July 2021 [Link](#)

• **UniBE ID Grants**
  Deadline: 29 August 2021 [Link](#)
Important Dates

- **CNB Brain Week**, 15 - 18 March 2021, online event; [Link](#)

- **Colloque Interville (Lausanne, Lugano, Bern)**, 28 May 2021, 14.30–18.00, Lugano; [Link](#)

- **World Sleep Forum: 5th Think Tank on neurodegeneration related to sleep**, 27–29 May 2021; virtual meeting. [Flyer](#)

- **7th Congress of the European Academy of Neurology – virtual congress**, 19 – 22 June 2021; [Link](#)

- **SNS Academy**, 9th module, 1-3 July 2021, Inselspital Bern, [Link](#)
Support

1) Topic of the Month: Check your Site Inspection Readiness

A clinical trial can be inspected by Swissmedic at the trial site at any time. Such GCP inspections focus on:

- ensuring the safety and personal rights of study participants,
- data integrity and validity,
- compliance with applicable regulations (GCP, HFV, KlinV and SOPs),
- whether the trial is being conducted in accordance with the scientific criteria for quality and integrity.

The announcement of an inspection is usually made 4-6 weeks before the scheduled inspection date.

The following are checked during the inspection:

- premises (lockable)
- equipment (incl. validations, calibrations)
- documents
- records (patient files)
- quality assurance system (SOPs)
- other relevant resources at the investigational site and participating services (e.g. laboratory, pharmacy)

Prior to an inspection, all documentation should be prepared and reviewed including the ISF or TMF. In general, it is better to always be inspection ready with timely filing and regular reviews than to catch up just before the inspection.

The inspector will check: (list based on frequent findings by authorities but not conclusive)

- Is the study documentation in the ISF/TMF complete with all relevant GCP essential documents and up to date?
- Informed consent of study participants
  - Are all consent forms available in original and completely filed (not only signature pages)?
  - Are only correct and current versions of the consent forms used?
  - Is the signature and date of the study participant in the participant’s own hand and the investigator has signed after the participant?
  - Has consent been given prior to study examinations and interventions, and sufficient time was granted for decision?
  - Is the informed consent process documented in the medical record including date and time of discussion, questions from the patient and verification of the inclusion & exclusion criteria?
  - If discussion and consent are on the same day - is the time of day of consent documented?
  - If relevant new information required re-consenting, was a KEK-approved Addendum to the original form signed by the patient? Best not multiple consents.
- Adverse events appropriately addressed and reported
  - Were the safety assessments carried out according to the protocol? If applicable, are AEs fully and correctly recorded and grading and relationship to treatment documented in source data?
o Are the criteria for SAEs correctly applied and all SAEs documented and reported in a timely manner and by a physician?
o Were there any problems/discrepancies related to recording and reporting of SAEs?
o Are emergency envelopes (if blinded) complete and intact?
o Are SUSAR reports, ASRs and safety information acknowledged and filed?

- How does the PI retain control and oversight of the conduct of the study?
  o Is there a communication plan? Are study meetings documented?
  o Are documents timely signed? Are e.g. laboratory printouts signed before treatment clearance?

- Is study staff appropriately qualified and trained and the delegation log and training logs properly completed, filed and signed?
  o Are all study staff and all study tasks on the delegation log and authorised before start date?
  o Are the timelines for training → authorisation PI signature → start date plausible?
  o When leaving the team, is the end date entered?
  o Is there documentation for the qualification of study staff (e.g. CVs, recognised GCP-certificates)? Is training of study staff (e.g. protocol, equipment, software, study procedures) correctly conducted and documented? Do training logs reflect training of amendments and safety relevant information (IB, SUSARs)?

- Are protocol and all protocol amendments reviewed and approved by the EC, signed and filed? Is there a procedure for implementing amendments?
  o Are protocol procedures properly and timely implemented?
  o Are all included study participants eligible according to protocol criteria?
  o Are treatment interruptions or discontinuations properly documented?
  o Were there protocol violations and are they properly documented and preventive measures taken?

- Are there shortcomings in the calibration and maintenance of equipment on site?
- Are study test products controlled and documented?
  o Is drug accountability coherent? Overall and per patient? Proof of receipt (shipping documents) and use available? Is traceability of a batch back to the patient ensured?
  o Are required transport and storage conditions fulfilled (lockable, access-controlled, temperature-controlled)?
  o Is complete temperature documentation available? Daily control with calibrated min-max-thermometer also for RT storage? And how was the response to deviations?
  o Are IMPs labelled and controlled against, mix-up and use after expiry date?
  o Are quality complaints documented and correctly addressed?
  o Are IMPs correctly returned to sponsor or destroyed? Are destruction certificates available?

- Were samples correctly collected, labelled, prepared (e.g. centrifugation), stored (e.g. temperature control, access) and shipped (e.g. conform packaging)

- Were there breaches of patient confidentiality (e.g. identity of patient on CRF or on SAE sent to sponsor, patient name on IMP returned to sponsor)

- Is there a quality management system in place?
  o Are there SOPs for study conduct available, up-to-date and trained?
  o Are the study procedures compliant with the SOPs?
  o Does the study documentation adhere to Good Documentation Practice?

For questions, please contact Susan Baumann-Barltrop, susan.baumann-barltrop@insel.ch.
2) Other News

SNF: Open research data: which data repositories can be used?

To support researchers in their search for suitable platforms, the SNF has published a list of data repositories that meet the ORD policy criteria. FAIR is a set of guiding principles to make data Findable, Accessible, Interoperable and Re-usable. Finding the "perfect" repository providing all necessary features to host FAIR data can be challenging. Thus, the SNF decided to define a set of minimum criteria that repositories have to fulfill to conform with its ORD policy. [Link]

3) Training

University Library Trainings

Writing Lab – Data Management Plan

Organized by the University Library Bern, the Writing Labs – Data Management Plan (DMP) offer support for researchers who have to write a DMP in the course of their SNF grants. The Writing Labs are free of charge for employees of Inselspital und the University of Bern.

- Tuesday, 2 March 2021, 13:00 – 15:00, zoom-meeting

[Link and Registration]

Open Science workshops: Open Access Publishing and Research Data Management

- 9 March 2021 (14:15 – 17:00): Open Access Publishing [Link]
- 14 April 2021 (10:00 – 11:00): Avoiding Predatory Publishers and Conferences [Link]
- 26 April 2021 (9:00 – 17:00): Introduction to research data management [Link]

Open Access and Open Data requirements by the SNF

- 20 April and 22 April 2021 (14:00 – 16:00): Life Sciences and Medicine [Link]
CTU Trainings:

Clinical Investigators I: Basic GCP & clinical research training

This is a course 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. The course is designed to introduce basic concepts of patient-oriented clinical research to health care professionals involved in the recruitment of study participants.

- **Tuesday, 20 + 27 April 2021**
  2 half days: 8:15-12:25 (on 20 April) and 13:25-17:30 (on 27 April)
  Date for voluntary exam: 4 May 2021, 14:00 - 15:30  (to get 1.0 ECTS)

- **Tuesday, 17 + 24 August 2021**
  2 half days: 8:15-12:25 (on 17 August) and 13:25-17:30 (on 24 August)
  Date for voluntary exam: 31 August 2021, 14:00 - 15:30  (to get 1.0 ECTS)

- **Tuesday, 12 October 2021**
  1 full day: 8:15-17:30
  Date for voluntary exam: 19 October 2021, 14:00 - 15:30  (to get 1.0 ECTS)

[Link and Registration](#)

Clinical Investigators II: Advanced GCP & clinical research training

This is a course which aims at providing especially sponsor-investigators and principal investigators with the knowledge to set-up their own project.

- **Tuesday, 18 May 2021**
  1 full day: 8:15-17:30
  Date for voluntary exam: 25 May 2021, 14:00 - 15:30  (to get 0.5 ECTS)

- **Tuesday, 7 + 14 September 2021**
  2 half days: 8:15-12:25 (on 7 September) and 13:25-17:30 (on 14 September)
  Date for voluntary exam: 22 September 2021, 14:00 - 15:30  (to get 0.5 ECTS)

- **Tuesday, 16 + 23 November 2021**
  2 half days: 8:15-12:25 (on 16 November) and 13:25-17:30 (on 23 November)
  Date for voluntary exam: 30 November 2021, 14:00 - 15:30  (to get 0.5 ECTS)

[Link and Registration](#)
GCP Refresher for clinical research

This course is aimed at providing a refresher training to clinical investigators with the essential knowledge of Good Clinical Practice (GCP) and of other regulatory and ethical requirements, and the skills for contributing to clinical trials.

The GCP Refresher course is split in four parts, whereas each part of the course is held as a separate CTU Lecture.

Lecture 1: consists of the basic principles and study project required documentation.
Lecture 2: addresses study preparation and conduct.
Lecture 3: continues on study conduct and project closure.
Lecture 4: is kept flexible and will address additional learning contents such as upcoming regulatory changes or key topics in clinical research.

Dates 2021:
- Lecture 1: Wednesday, 17th March 2021, 12.45-13.30, online via zoom
- Lecture 2: Wednesday, 21st April 2021, 12.45-13.30, online via zoom
- Lecture 3: Wednesday, 19th May 2021, 12.45-13.30, online via zoom
- Lecture 4: Wednesday, 16th June 2021, 12.45-13.30, online via zoom

Evening Round:
- Lecture 1: Wednesday, 29th September 2021, 17.00-17.45, online via zoom
- Lecture 2: Wednesday, 27th October 2021, 17.00-17.45, online via zoom
- Lecture 3: Wednesday, 24th November 2021, 17.00-17.45, online via zoom
- Lecture 4: Wednesday, 8th December 2021, 17.00-17.45, online via zoom

Link and Registration

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
- Thu, 11. MAR 2021, 15.00-17.00, Online – Deutsch
- Thu, 08. APR 2021, 15.00-17.00, Online – English
- Thu, 06. MAY 2021, 15.00-17.00, Online – Deutsch
- Thu, 10. JUN 2021, 15.00-17.00, Online – English
Additional dates will follow. Until further notice, all REDCap courses will be offered online. The course participants will receive a personal e-mail with specific instructions on how to login to the digital class room before the course is held.

Link and Registration

Introduction to Stata

Stata is intensively used in the medical science, both for statistical analyses and for supporting data managers and monitors. 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 is not available for external participants.

- Tuesday, 9 + 16 March 2021, 13:00 - 17:00
- Venue: ISPM; Mittelstrasse 43, 3012 Bern
- Costs: Internal participants: CHF 30.00

Link and Registration

back
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).

Let’s Talk! Dr. med. Thomas Meinel

How do you keep your academic career and your private/family life in balance?

Defining one of both as the top priority helps in case of inner conflict. Home office and digital availability are both a blessing and a curse for the compatibility, but some separation with “protected family time” is necessary. Establishing support by friends, especially if the grandparents are far away or unavailable. Good organization, teamwork and setting realistic goals. Nevertheless, it remains a constant struggle, especially since there are two careers involved. We should all fight and vote to reduce inequities for families in both domains.

Equal Opportunities Measures of the Faculties

The faculties and centres of the University of Bern take measures to promote equal opportunities in their respective structures and cultures. For the new phase 2021-24, they have been commissioned by the Executive Board of the University of Bern to focus on topics such as physical and mental impairments, age, ethnic origin, sexual orientation, social origin or gender identity, in addition to their previous efforts to promote gender equality.

All faculties and centers adopted new equal opportunities schemes for 2021-24, among them the Faculty of Medicine, as well as ARTORG: Link

Prevention against Sexual Harassment

30.04. - 07.05.2021  Save the date: Action week «Who comes too close goes too far!»

Prevention campaign against sexual harassment at the University of Bern. Different events will take place during the whole week. A detailed program will follow. Link
SNF to introduce quotas to promote gender equality in research

Gender equality is a prime concern of the Swiss National Science Foundation. To offer additional visibility to women in academia, it is introducing gender quotas in its evaluation bodies with immediate effect. According to the new rules, men and women each need to hold a share of at least 40 per cent in the Research Council and the Presiding Board. In commissions focusing on a specific field, the quota is adapted to the respective research area. Link

back
Recent Publications

Research on COVID-19


Stroke


Neuroimmunology


5) Graber M, Chan A. Multiple Sklerose und Schwangerschaft. Psychiatrie + Neurologie, 5/2020. PDF


SWEZ


Neurorehabilitation


Headache


Psychosomatic Medicine


Center for Rare Diseases (Zentrum für Seltene Krankheiten, ZSK)


Contact

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

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