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

March / April 2021

Content

Just Asking…
Congratulations
Calls for Grants and Prizes
Important Dates
Support
Gender Equality and Diversity
Recent Publications
Contact
Dr. med. Elena Wenz

What are your main research interest?

My main research interest are diseases going along with excessive daytime sleepiness and hypersomnolence. In my MD-PhD project, I aim to find new biomarkers for central disorders of hypersomnia (CDH). These include narcolepsy, idiopathic hypersomnia, hypersomnia associated with psychiatric diseases and sleep insufficiency. Except for narcolepsy, the pathophysiology of those diseases remains unclear and few biomarkers exist today. Patients therefore often wait for years to get diagnosed and treated, while suffering from life impairing symptoms.

In a subproject of the multicenter study “Swiss Hypersomnolence and Narcolepsy cohort study” (SPHYNCS) [1], I am going to compare peptide profiles in blood and cerebrospinal fluid (CSF) of patients with CDH with non-sleepy controls. By analyzing their peptidome with liquid-chromatography mass-spectrometry (LC-MS), we hope to gain further information about the pathophysiology of CDH and to identify new potential disease markers. A special focus will be on the neuropeptide hypocretin, that is known to be reduced in the cerebrospinal fluid (CSF) of patients with narcolepsy type 1 and involved in the stabilization of wakefulness and other important processes (e.g. energy homoeostasis, autonomic regulation, consume and reward associated behaviors). Nowadays, it is measured by a radioimmunoassay, that has several disadvantages (e.g. low availability, low accuracy, possible cross-reactions). Another goal of my thesis is therefore to establish LC-MS for the measurement of hypocretin.

What is your motivation to do research?

I believe that clinical research is a key to improve patient care. Research is also important to solve current and future societal problems, as highlighted by the current pandemic. Moreover, sleep is a fascinating research topic, as many aspects still are not well understood, even if it concerns every one of us every day and has a big impact on our wellbeing and certain diseases. On a personal level, I like the diversity of work involved with clinical research (patient...
related work, project management, data analyses, writing…), working in a motivated, interdisciplinary and translational team with experts on different fields and I enjoy looking deeper into a subject.


Dr. med. Elena Wenz is a resident at the Department for Neurology, Inselspital, Bern, part of the sleep research group at the Sleep-Wake-Epilepsy-Center, and PhD student at the Graduate School for Health Sciences at the University of Bern, Switzerland. Contact: elena.wenz@insel.ch
Congratulations

(1) Promotions

PD Dr. Carolina Gutierrez Herrera

Carolina Gutierrez Herrera has been granted the *venia docendi* in Experimental Neurology and the title of *Privatdozentin* by the University of Bern.

(2) Awarded Grants

**Internal Grant: Excellence in Diversity Fellowship**

PD Dr. med. Mirjam Heldner

**Title:** Bernese Intracranial Stenosis Study (BISS)
**Group:** Stroke

Dr. med. Madlaine Müller

**Title:** Perihemorrhagic edema (PHE) in non-traumatic intracerebral hemorrhage - Preparing the stage for a novel treatment target
**Group:** Stroke
Dr. phil. Rahel Schumacher

Title: From hearing to (mis)understanding – sounding out auditory processing difficulties following stroke

Group: Neurorehabilitation

Internal Grant: Bridge Scholarship in Translational Research in Neurology

Dr. med. Livia Fregolente Gomes

Title: Towards new biomarkers in Central Disorders of Hypersomnolence – a microbiome perspective

Group: SWEZ

Alexander Schmitz

Title: Harnessing the Potential of Extracellular Vesicles (EVs) in the Identification of Novel Biomarkers and Disease Mechanisms in ALS

Group: ZEN/ Saxena Group
(3) Other Awarded Grants

**PD Dr. med. Mirjam Heldner (Main Applicant)**

- **Funding Institution:** SNF (Project Funding) ([Link](#))
- **Title:** BISS – Bernese Intracranial Stenosis Study
- **Co-Applicant:** PD Dr. Pasquale Mordasine
- **Project Partner:** PD Dr. Johannes Slotbloom
- **Awarded Grant:** CHF 720’000

**Prof. Dr. med. Dr. sc. nat. Kaspar Schindler (Main Applicant)**

- **Funding Institution:** SNF (Project Funding) ([Link](#))
- **Title:** EEGMANN: Energy-Efficient Processing of Intracranial EEG based on Memory-Augmented Neural Networks
- **Co-Applicant:** Abbas Rahimi (IBM)
- **Awarded Grant:** CHF 597’507

(4) Appointments

**PD Dr. med. Arseny Sokolov**

has been appointed a member of the Development Group Dementia Rehabilitation der World Health Organization (WHO).
has been appointed president of the Young World Federation of NeuroRehabilitation (Link).

have been appointed members to the newly founded Medicoscientific Advisory Board Swiss MS Registry (Link).
Call for Grants and Prizes

Synapsis Foundation

**Focus of the grant:** Pre-clinical and clinical research; Protected Research Time (Career Development Award); Project Funding (Research Grants for PI)

**Eligible for:** Advanced postdoctoral researchers

- **Career Development Award:** Aims to facilitate the transition of young scientists into an independent position in research.

- **Research Grants for Principal Investigators:** Intends to promote innovative research projects of established research groups.

- **Submission Deadline:** 20 June 2021 [Link](#)

SAMW/ Bangerter-Rhyner Foundation:

Young Talents in Clinical Research

**Focus of the grant:** Clinical research

**Eligible for:** Young researchers

- **Beginner grant** to finance «protected research time»: max. CHF 75'000.00 per person, spread over 1 to 2 years. **Eligible for:** Assistant doctors working in Switzerland having obtained their medical degree no more than five years before the submission deadline.

- **Project grant** for a consecutive research project: max. CHF 40'000.00 per year for up to 2 years. **Eligible for:** In a subsequent step, grantees can submit a proposal for a project grant provided that they have obtained their medical degree no more than 8 years before the submission deadline.

- **Deadline:** 30 June 2021 [Link](#)
Other Open Calls for Proposals

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

- **Stiftung Pfizer Forschungspreis**
  Deadline: 15 May 2021 [Link](#)

- **SNF IICT 2021**
  Deadline: Letter of Intent 25 May 2021; Submission of Proposal: 1 November 21 [Link](#)

- **Théodore-Ott-Prize**
  Deadline: 31 May 2021 [Link](#)

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

- **EPFL/ Bertarelli Catalyst Fund**
  Deadline: 1 June 2021 [Link](#)

- **Synapsis Foundation**
  Deadline: 20 June 2021 [Link](#)

- **SAMW/ Bangerter-Rhyner Foundation: Young Talents in Clinical Research**
  Deadline: 30 June 2021 [Link](#)

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

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

- **SNF Postdoc.Mobility**
  Deadline: 1 August 2021 [Link](#)

- **UniBE ID Grants**
  Deadline: 29 August 2021 [Link](#)

- **EAN Research Fellowship**
  Deadline: 31 August 2021 [Link](#)
Important Dates

- **World Sleep Forum: 5th Think Tank on neurodegeneration related to sleep, 27–29 May 2021; virtual meeting.** [Link](#)
- **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](#)
- **Sleep Medicine Summer School, 5-9 July 2021, Grenoble Alpes University,** [Link](#)
- **SFCNS Summer School, 20 August 2021, Hörsaal Langhans, Inselspital Bern,** [Link](#)
Support

1) Topic of the Month: Success Story

This month, we are happy to present you a “success story”: the Velux Stiftung Grant project. If you have other success stories to share with the research community of our Department, we are more than happy to hear and read about it! Please contact chantal.kottler@insel.ch.

Velux Stiftung grant: “Deciphering the non-circadian effects of light on sleep”

Co-PIs:
Prof. Dr. Sonja Kleinlogel,
Prof. Dr. Antoine Adamantidis, and
Dr. Ludovic Mure

Institute of Physiology, University of Bern and
Department of Neurology, Zentrum für Experimentelle Neurologie, Inselspital University Hospital Bern

Funding: 400 000 CHF over 3 years

Starting date: March 1rst, 2021
The proposed study is a project based on the collaboration between Drs Kleinlogel and Adamantidis that are experts in vision/optogenetics and sleep regulation, respectively, and Dr. Mure, which has longstanding expertise in non-visual photoreception. Synergizing our fields will kick-start a new research direction into non-circadian regulation of sleep, mood, cognition, and potentially other physiological effects directly mediated by light. In modern societies, humans are exposed to artificial lighting and shift work, misaligning their circadian clock and leading to sleep disruption. Sleep disruption is a hallmark of several disorders including neurodegeneration, depression, and cardiovascular disease. Our multidisciplinary project, combining retina biology, sleep research, and biotechnology, opens the path to a better understanding of how light acutely affects sleep and alertness. It will have a seminal impact on preventing and managing an increasing epidemic of chronic diseases triggered by aberrant light exposure and sleep disruption. Our proposal also includes a very specific translational approach, namely the evaluation of an optogenetic treatment of sleep disorders in retinal degeneration patients, rendering the project directly relevant to human health.

Abstract: Light influences humans at all levels – it sets our circadian clock, controls our hormones, sleep, alertness, mood, and adapt our whole physiology to the day-night cycle. However, in modern societies, continuous artificial lighting leads to chronic disruption of the circadian and sleep-wake cycles, either predisposing to or directly inducing several diseases including neurodegeneration, major depressive disorder, and seasonal affective disorder. Light can modulate the sleep-wake cycle either indirectly through its effect of light on the phase of the circadian clock or directly via retinal ganglion cell projections to hypothalamic and thalamic nuclei implicated in the regulation of sleep and alertness. The frequent appearance of sleep disorders in retinal degeneration patients with a functioning circadian clock support the assumption that vigilance states are directly regulated by retinal input.

While retinal light entrainment of the circadian clock is well understood, the non-circadian, direct effects of light on alertness remain elusive. Understanding how light directly affects sleep-wake controlling nuclei will have a seminal impact on preventing and managing an increasing epidemic of chronic diseases that are related to aberrant light exposure and sleep disruption.

Our consortium proposes an interdisciplinary approach, coupling cutting-edge neuroscience and biotechnology methods to identify retinal ganglion cell pathways to sleep-wake controlling brain centers and to test their functional effects on vigilance states. In a translational approach, we will test the possibility to optogenetically revert the negative effects of retinal degeneration on the direct sleep-wake pathways and try to find the human ganglion cell correlates of direct sleep-wake regulation.

This study is topical in modern times dominated by artificial lighting and will constitute the first step towards a systematic dissection of the mechanisms and pathways supporting the direct effects of light on sleep-wake regulation. The new insights will pave the way to tailored therapies counteracting diseases due to aberrant light exposure.

Contact: Dr. Ludovic Mure, ludovic.mure@unibe.ch
2) Other News

Centralized Platform Research.swiss

research.swiss is a centralised platform showcasing scientific and technological cooperation opportunities between Switzerland and the rest of the world. Launched by the Swiss State Secretariat for Education, Research and Innovation (SERI) in collaboration with Swissnex, the new platform aims to facilitate collaboration in research and innovation by providing researchers, higher education institutions and innovators with a unique overview of the most important funding instruments, calls for joint research projects, and mobility programs. Link

3) Training

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, 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 Mai 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 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, 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

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. Tatiana Brémová-Ertl

What is one thing relating to women in medicine that you hope to see change in the next years?

The fear of becoming pregnant, while the residency is still not finished. We are afraid that we will not be able to align our lives as mothers with the night shifts, with the burden of the medical work, with the medical time- and workload. We want to be the perfect mothers, the perfect doctors, and just being perfect in every part of our lives. If the female doctor is also dedicated to research, it often leads to even longer delays of having children. It is not right postponing family planning because of career goals, if the woman feels like having a family.

There is an internal conflict in a lot of us, wanting children, but preferring finishing the career goals – residency, assistant professorship, going abroad for a research fellowship, and so on.

It might be difficult for men to understand this, since they cannot physically be in such a situation, and cannot perceive this conflict. For them the whole situation is much easier. We compromise – until it is too late for having family at all.

World Stroke Organization: Women in Stroke Initiative: PD Dr. med. Mirjam Heldner selected as Nominee

The World Stroke Academy took the International Women’s Day as an occasion to celebrate the achievements and careers of women in stroke and highlight female leadership. The World Stroke Organization board members were asked to participate in this initiative and nominate outstanding women working in stroke medicine, stroke research and stroke advocacy.

Mirjam Heldner is one of the nominees. Congratulations!

Link
Free Coaching on “Balancing Career and Family” of the University of Bern

The Office for Gender Equality of the University of Bern offers a free coaching on “Balancing Career and Family” for all staff and students of the University. The coaching can be visited individually or with your partner. The coaching is free of charge and can be held in German or English.

See also: Work-life balance at the University of Bern

Office for Gender Equality: Podcast for its 30th Anniversary

The Office for Gender Equality of the University of Bern celebrates its 30th anniversary – among other activities – with a podcast series on different aspects of gender equality. The podcasts are held in German and tackle questions such as “Mentoring und wissenschaftliche Exzellenz” or “Sexuelle Belästigungen an Hochschulen”.

Prix Lux 2021: Call for Proposals

A call for proposals for the Prix Lux, the equals opportunities prize of the University of Bern, has now been published. Nominations can be made for university units (institutes, faculties, nccrs) or groups of persons (groups or teams of students or staff) who are committed to equal opportunities at the University of Bern. The price winner will receive CHF 2'000 and a luminous object. The winner is elected by a jury.

The deadline for applications is 30 June 2021.
Recent Publications

Research on COVID-19


Stroke


**Neuroimmunology**


Psychosomatic Medicine


Neurorehabilitation


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


ZfPB


back
Contact

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