

# CNB Newsletter

## 07 / 2025

Dear CNB members,

With the CNB Newsletter, we intend to inform you about upcoming CNB events, ongoing projects and give insights into the research topics of selected CNB members. In this edition we look back on the Brain week 2025 and are looking forward to the 20<sup>th</sup> CNB Annual Meeting 2025 which will take place on September 5<sup>th</sup>. The CNB annual meeting will again include a poster session, that welcomes contributions from all research fields and career stages. Please note that graduate students may obtain a earn credit for presenting their posters. Registration link: <https://www.conftool.com/cnbam2025>

The CNB continues to foster collaboration within the neuroscience community at the University of Bern. In this issue, we are pleased to introduce two new CNB research group leaders:

- Prof. Dr. Iris-Katharina Penner, whose work focuses on cognitive and emotional functioning in neuroinflammatory and neurodegenerative disorders, with a particular emphasis on multiple sclerosis and fatigue.
- Prof. Dr. Claudio Pollo, an expert in functional and epilepsy neurosurgery, whose translational research includes innovations in deep brain stimulation and the development of implantable EEG technologies.

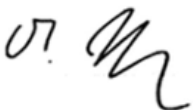
We are also excited to introduce The NeuroClub, a new student-led initiative that aims to bridge the gap between students and Bern's vibrant neuroscience community. By promoting early and interdisciplinary exchange, The NeuroClub supports students in exploring the many opportunities in neuroscience and encourages connections that may lead to future collaborations.

If you would like to showcase your research in a future newsletter, or if your group is not yet represented on the CNB platform, please don't hesitate to reach out to us.

As we are currently updating and improving the CNB website, we invite you to contact Ms. Alessia Carlucci ([alessia.carlucci@unibe.ch](mailto:alessia.carlucci@unibe.ch)) if you wish to make changes to your research group's page (e.g., add photos, videos, new members, etc.).

Lastly, if you follow us on X (formerly Twitter), we would be happy to repost your research articles to help promote your work. Our handle is @clin\_neurobern.

We hope you enjoy the July 2025 edition of the CNB Newsletter!



Prof. Dr. Mirjam Heldner  
President CNB

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### Brain Awareness Week 2025

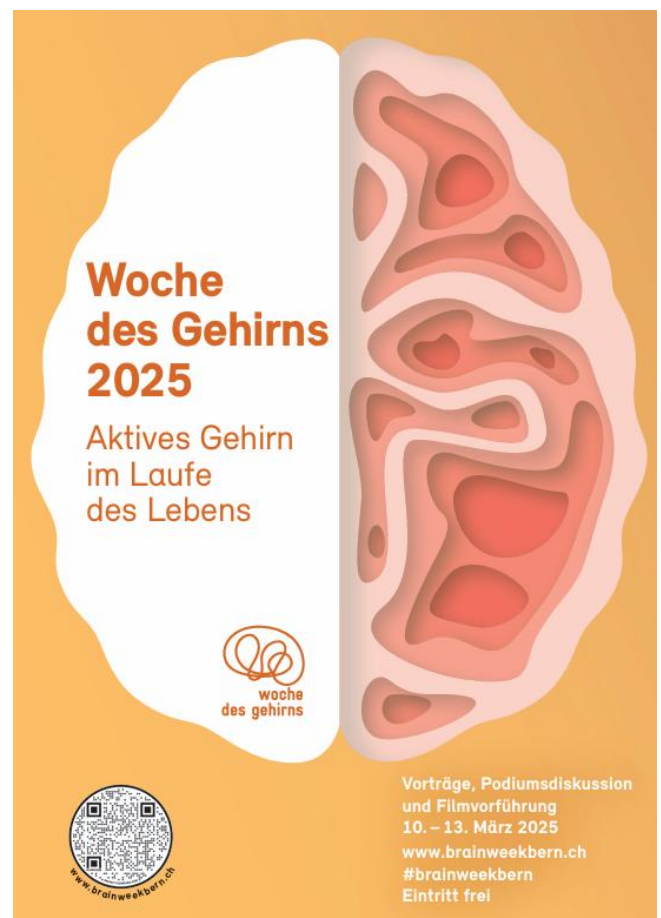
**Monday, 10<sup>th</sup> – Thursday, 13<sup>th</sup> of March 2025**

The theme “*Aktives Gehirn im Laufe des Lebens*” attracted a broad audience and sparked engaging discussions on how to support brain health at every stage of life. The week offered accessible insights into neuroscience through a diverse program that included lectures, a film screening, and a lively panel discussion. Experts from various medical and neuroscience disciplines highlighted how mindfulness, physical activity, and daily habits can help maintain a healthy and active brain — from childhood through to older age.

The evenings on Monday and Tuesday were particularly well attended, with full auditoriums and enthusiastic audiences.

On Wednesday, the film “*Honig im Kopf*” was screened at Cinema Rex, prompting emotional reflections on Alzheimer’s disease and family life. Simultaneously, during the CNB Researchers’ Night at UniS, young researchers had the opportunity to present and discuss their projects with students and visitors in an interactive setting. The week concluded on Thursday with a well-received panel discussion titled “*Mythen und Wahrheiten*”, which explored common brain myths and the scientific evidence behind them. This closing event also drew significant interest and was attended by over 350 guests.

We sincerely thank all our sponsors and partners for their generous support – and all attendees who helped make this week such a memorable event.



### Mindfulness and Movement – Highlights from Monday Evening

*Monday, 10th of March 2025*

Moderation: Prof. Dr. Maxime Baud

Sponsor of the day: Cerebral

The Brain Awareness Week 2025 began with a strong opening evening at the Aula of the University of Bern, featuring two engaging lectures on the impact of mindfulness, meditation, and physical activity on brain health across the lifespan.

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### ***“Wie Achtsamkeit und Meditation das Gehirn auf Trab halten”***

Prof. Dr. phil. Dipl.-Psych. Iris-Katharina Penner

Prof. Dr. Penner provided an insightful overview of recent findings in the neuroscience of mindfulness and meditation. Her talk highlighted how regular mindfulness practices can promote brain health by influencing both structure and function – including increased grey matter density, reduced stress-related damage, and improved self-regulation. The lecture also emphasized key protective factors such as self-efficacy, emotional resilience, and inner awareness in maintaining cognitive well-being.

### ***“Wie viel Sport braucht das Gehirn”***

Prof. Dr. med. Barbara Tettenborn

In the second talk of the evening, Prof. Dr. Tettenborn explored the vital role of physical activity in supporting brain health. Drawing on clinical studies and meta-analyses, she highlighted how regular exercise promotes neuroplasticity, enhances cerebral blood flow, and reduces the risk of cognitive decline and stroke. Her presentation also emphasized the mental and emotional benefits of movement, reinforcing the idea that physical activity is a lifelong investment in both neurological and psychological well-being.

Together, the two presentations provided a compelling and complementary perspective on how movement and mindfulness contribute to maintaining a healthy brain — from early development to older age.



### **Tuesday Evening: From Young Brains to Aging Minds**

*Tuesday, 11th of March 2025*

Moderation: Prof. Dr. Mirjam Heldner

Sponsor of the day: SYNAPSIS

The second evening of the Brain Awareness Week 2025 focused on supporting brain development and cognitive health across the lifespan – from early childhood to older adulthood.

### ***“Bewegung fürs Gehirn? Wie Sport die kognitive Leistung und Hirnentwicklung bei Kindern mit und ohne Krebserkrankung beeinflusst”***

Dr. Valentin Benzing

Dr. Benzing presented his innovative research on how targeted physical activity can support brain development in children, including those undergoing cancer treatment. Drawing on data from the KiKli Fit project, he demonstrated that customized exercise programs not only enhance physical fitness, but also improve executive function, motivation, and self-esteem. His message was both clear and powerful: movement is medicine — especially during the most challenging phases of life.

### ***“Aktiv der Demenz vorbeugen: Strategien für ein fittes Gedächtnis”***

Prof. Dr. phil. Jessica Peter

In the second lecture, Prof. Dr. Peter focused on practical strategies to maintain memory and prevent dementia. She highlighted the importance of mental stimulation, social engagement, and healthy lifestyle choices in slowing cognitive decline. Backed by scientific evidence, her talk equipped the audience with concrete tools to support brain health in later life.

The evening’s emphasis on brain health — from young minds to aging brains — provided a natural transition to Wednesday’s film night at Kino REX, where *“Honig im Kopf”* was screened. This moving story explored Alzheimer’s disease through the eyes of a granddaughter and her grandfather, offering a heartfelt portrayal of memory loss, empathy, and the enduring strength of family bonds.

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### CNB Researchers' Night

Wednesday, 12<sup>th</sup> of March 2025

On Wednesday evening, Brain Awareness Week welcomed the scientific community with the CNB Researchers' Night, held at UniS in Bern. The event brought together students, early-career researchers, and experts from across the wide spectrum of neuroscience.

The evening offered a platform for informal exchange, interactive discussions, and networking — all within a relaxed and stimulating atmosphere. From brain models and data visualizations to engaging conversations over snacks, attendees had the chance to explore the frontiers of clinical neuroscience in an accessible and inspiring way.

Events like this are essential for fostering collaboration, sparking innovation, and promoting a culture of open, interdisciplinary science.

Thank you to all poster presenters – we can't wait to see you again next year!

Don't forget to save the date for the next Poster Session:  
**Wednesday, 18 March 2026.**

Thursday, 13<sup>th</sup> of March 2025

### Panel discussion "Mythen und Wahrheiten"

Moderation: PD Dr. Maria Stein

Sponsor of the day: FRAGILE Bern

The week concluded on Thursday evening with a lively panel discussion titled "Myths & Truths about Brain Health," moderated by PD Dr. Maria Stein.

A panel of renowned experts tackled widespread misconceptions such as *"The brain rests during sleep"* and *"Memory loss in old age is inevitable."* Blending scientific insight with a touch of humor, the speakers provided the audience with a clearer understanding of what neuroscience can currently explain — and where important questions still remain.

Each expert addressed a commonly held belief related to their area of research, shedding light on the facts and fiction behind popular claims.

- Prof. Dr. Leila Tarokh, PhD addressed the myth *"Unser Gehirn ruht in der Nacht."* from a sleep science perspective.

PD Dr. med. Andreas Nowacki explored the statement *"Schmerzen haben immer einen organischen Ursprung."*, providing insights from neurology and functional diagnostics.

- Dr. Corina Schöne explained why the vestibular system is more than just a balance organ, responding to the claim *"Das Gleichgewichtsorgan – nur wichtig für die Balance."*

Prof. Dr. Claudio R. Nigg examined the belief *"Bewegung kommt nur der körperlichen Gesundheit zugute."*, sharing findings from behavioral and psychological research.

- Prof. Dr. med. Bogdan Draganski closed the round by challenging the idea that *"Das Gedächtnis lässt*

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*mit dem Alter nach und wir können nichts dagegen tun.“*



Covering topics ranging from sleep and pain to memory and movement, the discussion highlighted the growing importance of critical thinking and scientific evidence in a world increasingly shaped by misinformation. The evening concluded with lively questions from the audience and a strong sense of how impactful education and awareness can be in promoting both individual and public brain health.

The next Brain Week Bern will take **place from 16 to 19 March 2026.**

The program and further information will be published on the Brain Week website: [www.brainweekbern.ch](http://www.brainweekbern.ch). You can also find programs and impressions from past events on the site.

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### Introduction of the new CNB research group leaders

**Prof. Dr. phil. Dipl.-Psych. Iris-Katharina Penner**

Associate Professor of Cognitive Neurology and Neuropsychology at the Faculty of Medicine, University of Bern, Switzerland, and Head of Neuropsychology at the University Hospital Bern, and the Rehabilitation Clinic in Riggisberg, Switzerland.

#### Competency Profile

Cognitive neuroscientist and specialist in cognitive neurology and neuropsychology, with over 25 years of experience in neurocognitive research. Her work centers on the development of methodological tools for the diagnosis and treatment of neurodegenerative and neuroinflammatory diseases of the central nervous system (CNS).

#### Biography

Iris-Katharina Penner pursued her studies in psychology at the Universities of Bonn and Berlin, obtaining her diploma from the Free University of Berlin. She completed her PhD at the Department of Neuroradiology (University Hospital Basel) and the Department of Cognitive Psychology and Methodology (University of Basel), focusing on cognitive and functional changes in patients with multiple sclerosis (MS).

From 2003 to 2009, she held positions as a senior neuroscientist at the Department of Cognitive Psychology and Methodology and as an associate neuroscientist at the Department of Neurology (University Hospital Basel). During this time, she conducted research on cognition, fatigue, and cognitive rehabilitation in individuals with MS.

Between 2009 and April 2015, she continued her academic work as a senior neuroscientist and lecturer at the University of Basel. Concurrently, she worked in private practice at



the Neurozentrum in Zurich, specialising in neuropsychological assessment of patients with neuroinflammatory and neurodegenerative disorders. In May 2015, she joined the

Department of Neurology at Heinrich Heine University Düsseldorf, where she founded the COGITO Centre for Applied Neurocognition and Neuropsychological Research. In 2016, she was appointed APL Professor of Cognitive Neuroscience by the same university.

Since January 2022, she has served as Head of Neuropsychology at both the University Hospital Bern and the Rehabilitation Clinic in Riggisberg, Switzerland. In December 2023, she was appointed Associate Professor of Cognitive Neurology and Neuropsychology at the University and University Hospital of Bern. She holds the Swiss federal certification in neuropsychology (EAN) and is additionally trained in Acceptance and Commitment Therapy.

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Iris-Katharina Penner is recognised nationally and internationally as a leading expert in the field of human cognition and fatigue. She is the developer of the Fatigue Scale for Motor and Cognitive Functions (FSMC) and has published extensively in high-impact international journals as well as in edited volumes. She is an active member of several professional and scientific organisations and boards. From 2013 to 2015, she served as President of the International MS Cognition Society (IMSCOGS). Her clinical and research interests centre on fatigue, cognitive processes, and brain plasticity in neurodegenerative and neuroinflammatory brain diseases. Additionally, she is engaged in the Brain Health Initiative at the University Hospital Bern.

### Research Group

My research group is dedicated to the development and application of behavioural interventions aimed at alleviating symptoms such as cognitive decline, fatigue, depression, and anxiety. In addition to exercise- and exergame-based interventions, we are committed to promoting knowledge of mindfulness-based meditation and neuroeducation among individuals with MS. As meditation constitutes an integral component of brain health, we strive to increase its implementation in clinical settings.

Another key research focus is the investigation of fatigue across various medical conditions, with a particular emphasis on elucidating its underlying pathophysiology.

The group comprises early-career psychologists who are passionate about both clinical practice and scientific inquiry. We also supervise medical and psychology students in the context of their Master's and doctoral theses. Our overarching objective is to enhance patient care by advancing a more tailored and personalised approach to medicine.

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### Introduction of the new CNB research group leaders

#### Prof. Dr. Claudio Pollo

Chief deputy-Department of Neurosurgery  
Head of stereotactic- functional and epilepsy neurosurgery  
Inselspital Bern, Bern University Hospital, Switzerland

#### Academic and Clinical Background

Claudio Pollo was trained in Stereotactic, Functional and Epilepsy Neurosurgery in Lausanne (Prof. J.G. Villemure) and Grenoble (Prof. A.L. Benabid). He performed a master in biomedical engineering at the EPFL. In 2012, he joined the neurosurgery team of the University Hospital Bern (Prof. A. Raabe).

#### Research Focus and Innovations in Deep Brain Stimulation (DBS)

His academic career has been focused on translational research in the field of functional and epilepsy neurosurgery. He first obtained the research price of the European Society of Stereotactic and Functional Neurosurgery, followed by FNS and Inosuisse grants dedicated to computed models of DBS and development of new segmented DBS leads. In 2014, the proof of concept of directional DBS with segmented leads was implemented in human for the first time in Bern and published (Pollo C et al, Brain, 2014).

Numerous publications about directional DBS and in particular automatic DBS programming (image-based and electrophysiology-based with the use of AI) have been published since that time in collaboration with the colleagues of the Neurology Department-Inselspital and biomedical engineers from the EPFL and sustained from SNF ambizione grants (Dr Khoa Nguyen-Biomedical Engineer, Dr Gerd Tinkhauser-Neurology Inselspital). He co-founded a spinoff of the EPFL focused on the development of an innovative directional DBS system based on MEMS fabrication.



#### Epilepsy Neurosurgery and EEG Innovation

In the field of epilepsy neurosurgery, he first participated to the development of implantable autonomous wireless Bio-Electronic devices for long term EEG monitoring (SNF grant together with EPFL). Later, he participated to the development and implantation of a subcutaneous device for long term EEG monitoring (EPIOS) led by Prof Maxime Baud-Neurology Inselspital and in collaboration with the Wyss Center Geneva. Currently, he is leading a translational BRIDGE project together with Prof Selman Sakar-EPFL and Prof Maxime Baud- on the development of an innovative flow-driven endovascular EEG (endo EEG) for epilepsy monitoring.

#### Academic Recognition and Leadership

His clinic and academic work has been internationally recognized through more than 100 peer reviewed publications ([pollo c - Search Results - PubMed](#)), through regular hosts and supervision of medical students and neurosurgical fellows, through serving as a reviewer in several international journals and through executive functions in Swiss as well as International Neurosurgical Societies.

### The NeuroClub: Fostering Interdisciplinary Neuroscience Collaboration between Researchers and Students

#### Why The NeuroClub?

Bern is home to many excellent neuroscientific research projects. Yet for students, navigating the wide range of opportunities and finding meaningful ways to get involved can be challenging.

At The NeuroClub, we have made it our goal to bridge this gap: we believe that promoting early and interdisciplinary exchange between students and researchers may lead to fruitful collaborations.

#### Our Initiatives

The NeuroClub organizes a variety of events throughout the academic year:

**NeuroClubs:** These evening events (see picture) focus on neurological topics like brain tumors or Parkinson's disease. Clinical insights are presented alongside innovations from fields such as biomedical engineering and AI in medicine, with each event designed to be as interactive as possible.

**NeuroClub Research Lectures:** Directly integrated into the curriculum of various study programs, these lectures offer researchers a large platform to share their work with young students, sparking early interest and collaborations. Our inaugural lecture included speeches from Prof. Dr. Urs Fischer (stroke research) and Prof. Dr. Dr. Maxime Baud (epilepsy research), offering students firsthand exposure to two key areas of clinical neuroscience.

**Research Opportunities Platform:** Furthermore, the "Research Opportunities" section of our website offers a fast and simple way to share openings for master's theses, doctoral theses, jobs, or other research projects. By combining our strong reach among students with your expertise, we

## The NeuroClub

can help connect motivated individuals with your research quickly and directly.

Other recent events included a guided tour of the 7-Tesla MRI facility and the NeuroTec Loft at SITEM, organised in collaboration with Prof. Dr. Roland Wiest and researchers from Prof. Tobias Nef's group.

#### Let's Create Something Together!

We are enthusiastic about fostering strong ties across the neuroscience community and invite you to collaborate with us. Whether you are looking for student involvement in your projects, wish to share your research, or seek interdisciplinary partnerships, The NeuroClub offers an excellent platform for mutual growth.

Feel free to reach out to us with any questions or ideas. We look forward to working with you in advancing neuroscience research and education together.

#### Contact Information

- Email: [theneuroclubbern@gmail.com](mailto:theneuroclubbern@gmail.com)
- Website: [www.theneuroclub.com](http://www.theneuroclub.com)



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### Upcoming events

05. September 2025	20 <sup>th</sup> CNB Annual Meeting
16 <sup>th</sup> -19 <sup>th</sup> March 2026	Brain week Bern 2026
18 <sup>th</sup> March 2026	CNB Poster Session with Apéro

*For any inquiries, please contact:*

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