

Biosketch

- 1983, Diploma in Chemistry (“Master”) at ETH Zürich, Switzerland
- 1989, Ph. D. in solid state NMR (Time Domain Zero Field NMR and NQR Spectroscopy with Pulsed Fields) at ETH Zürich with Prof R.R. Ernst
- 1989 Post Doctoral Fellow, ETH Zürich.
- 1990-1991 Boswell Fellow, California Institute of Technology, Pasadena and Huntington Medical Research Institutes, Pasadena, CA, USA. Work on methods and applications of clinical proton magnetic resonance spectroscopy.
- 2000 Habilitation in the field “Medical Magnetic Resonance” at the Medical Faculty, University Bern
- 2006 Associate Professor bestowed by University Bern
- 2023 Emeritus with continuing partial employment and research activity at University Bern

Research interests

- Magnetic resonance spectroscopy methods and applications in brain, spine, skeletal muscle, heart, liver, prostate
- Metabolic imaging, incl. heteronuclear MR using ^{13}C , ^2H , ^{31}P
- MR for microstructure analysis
- MR elastography
- Modelling and machine learning
- MRS in normal physiology and metabolic diseases, including ectopic lipids

Recent projects

- 2017-2022 PI of Swiss National Foundation (SNF) project: “Metabolic Fingerprints from Magnetic Resonance: Levels, Maps, and Microstructure”
- 2018-2023 CI and work package manager of Horizon 2020 Innovative Training Network, “Integrating Magnetic Resonance Spectroscopy and Multimodal Imaging for Research and Education in MEDicine (“INSPIRE-MED”)”
- 2020-2022 CI in project “Role of the Liver in Glucose Homeostasis Using Metabolic Imaging (LEMON)” (PI Prof. L. Bally)
- 2020-2023 Project partner in SNF project: “Impact of Phenylalanine on Cognitive, Cerebral and Neurometabolic Parameters in Adult Patients with Phenylketonuria - a Randomized, Placebo-Controlled, Crossover, Non-inferiority Trial (PICO)” (PI Prof. R Everts)
- 2020-2024 Project partner in SNF project: “MAPIT - MAGnetic resonance (MR) relaxometry for extracellular volume (ECV) mapPIng combined with elasTography for noninvasive characterization of diffuse liver disease” (PI Prof. A Huber)
- 2020-2024 Project partner in SNF Eccellenza project “DEciphering the Enigma of Postprandial Hyperinsulinaemic Hypoglycaemia after Bariatric Surgery (The DEEP Project)” (PI Prof L Bally)

- 2021-2023 CI in Sitem Support Fund Project “Ultra-high field imaging of brain glucose metabolism in diabetes and mild cognitive impairment” (PI PD J. Peter)
- 2022-2026 Project partner in SNF project: “MISSION Deuterium; Metabolic imaging of the brain at ultra high field MRI: feasibility study of spectroscopic methods for exploration of brain metabolism without ionizing radiation” (PI Prof. J. Slotboom)
- 2022-2027 Project partner in SNF project within replacement program for advanced ERC grants: “Strengthening memory formation for retrieval despite amnesia” (PI Prof. K. Henke)

Funding

- 1995 – present: 20 SNF projects as principle or co-applicant (7 as PI), 2 European projects.

Honors

- Sir Peter Mansfield Lecturer at annual meeting of the European Society for Magnetic Resonance in Medicine and Biology (ESMRMB)
- Fellow and Honorary Member of the ESMRMB
- Fellow of the International Society of Magnetic Resonance in Medicine (ISMRM)