

# MRI Research Day 2025

3 June 2025 | Campus Biotech, Geneva

N

## 1 Inhibitory control and white matter connectivity in 5-to-8-year-old children

Romain Ceresetti, Gianvito Laera, Carole Guedj, Despoina Demenega, Jonathan Wirsich, Jonas Richiardi, Matthias Kliegel, Damien Marie, Clara James

O

## 2 Effective connectivity of working memory in primary school children

Lia Bollinger, Carole Guedj, Gianvito Laera, Jonas Richiardi, Matthias Kliegel, Damien Marie, Clara James

I

## 3 Towards investigating salience: an awake oddball preclinical fMRI study

Nikolaos Molochidis, Francesca Barcellini, Frederico Severo, Jean-Baptiste Perot, Christina Grimm, Valerio Zerbi

S

## 4 KISME – Kernel-based incoherent sampling of multi-echo data

Quentin Raynaud, Benjamin ID James, Frederic Dick, Martina F. Callaghan, Antoine Lutti

S

## 5 Functional Magnetic Resonance Spectroscopy at 7 Tesla: Examining Glutamate & Lactate Dynamics during Processing Speed

Antonia Kaiser, Ying Xiao, Mark Widmaier, Lijing Xin

E

## 6 SISMIK: Deep learning-Assisted Motion Artifact Correction in Brain MRI, from Spin-Echo to Turbo Spin-Echo

Oscar Dabrowski, Frédéric Grouiller, Sébastien Courvoisier

S

## 7 Microstructure and Axon Radius Mapping using diffusion MRI at 7T: non-invasive prediction of conduction delays in the brain

Saina Asadi, Arthur Spencer, Yasser Alemán-Gómez, Hélène Lajous, Erick J. Canales-Rodriguez, Emeline Mullier, Louise de Wouters, Isotta Rigoni, Maciej Jedynak, Michael Chan, Alexandre Cionca, Dimitri Van De Ville, Serge Vulliémot, Olivier David, Patric Hagmann, Ileana Jelescu

S

## 8 Functional Creatine Kinase Imaging (fCKI) for brain functional and metabolic imaging

Mark Widmaier, Antonia Kaiser, Pontus Pandurevic, Song-I Lim, Andre Doring, Zhiwei Huang, Daniel Wenz, Ying Xiao, Yun Jiang, and Lijing Xin

R

## 9 Does REM sleep matter for emotional memory consolidation?

Laure Colin, Alison Montagnin, Kinga Igloi, Sophie Schwartz, Virginie Sterpenich

E

## 10 Functional glutamate mapping with 1H-FID MRSI

Zhiwei Huang, André Döring, Penghui Du, Antonia Kaiser, Lijing Xin

T

## 11 Measuring glymphatic dynamics using diffusion MRI at 7 Tesla

Ibtisam Aslam, Tommaso Pavan, Arthur Spencer, Roberto Martuzzi, Federica Ribaldi, Giovanni Frisoni, Ileana Jelescu

S

## 12 Mapping Brain Regional Differences in Young Rats with Chronic Liver Disease Using Fast 1H-FID-MRSI at 9.4T

Gianna Nossa, Brayan Alves, Thanh Phong Le, Dario Sessa, Stefanita Mitrea, Jessie Mosso, Bernard Lanz, Valerie McLin, Cristina Cudalbu

O

## 13 Emotion components and fMRI: validating a VR video game paradigm testing Expectation and Uncertainty

Martina Nonni, Emmanuel Badier, Yvain Tisserand, Patrik Vuilleumier

R

## 14 Optimisation strategy for determining refocusing flip angle trains in the multi-echo spin-echo sequence for T2 mapping at 7T

Emilie Sleight, Ludovica Romanin, Gian Franco Piredda, Frédéric Grouiller, Tom Hilbert, Dimitrios Karampinos

## 15 Effect on spectral quantification of Back-Linear-Predicted and original first order dephased 1H-FID-MRSI data

Alessio Siviglia, Brayan Alves, Jessie Mosso, Cristina Cudalbu, Bernard Lanz

## 16 Application of MRspecLAB for MRS/MRSI Data Processing: A Low-Code, and Highly Flexible GUI Platform

Ying Xiao, Antonia Kaiser, Matthias Kockisch, Robin Carlet, Alex Back, Zhiwei Huang, Xinyu Liu, André Döring, Mark Widmaier, Lijing Xin

## 17 High Resolution in vivo preclinical 1H-FID-MRSI using Compressed Sensing : when acceleration leads to hastiness

Brayan Alves, Thanh Lê, Antoine Klauser, Wolfgang Bogner, Bernard Lanz, Bernhard Strasser, Cristina Cudalbu

## 18 Individual MRI-based EEG source localization in Aging

Toussas Konstantin, Brunet Denis, Bouhour Camille, Vulliémot Serge, Unschuld Paul, Bréchet Lucie

## 19 Retrospective lipid removal in preclinical 1H FID MRSI at ultra-high field and potential effects on metabolite concentration estimates

Tan Toi Phan, Brayan Alves, Thanh Phong Lê, Antoine Klauser, Bernard Lanz, Cristina Cudalbu

## 20 From Raw MRI Heads to Comparable ESI Solution Space: An Automated Cartool Solution

Denis Brunet, Serge Vulliémot

## 21 Neural Correlates of Cognitive Impairments in Patients with Parkinson's Disease with Hallucinations

Lada Kohoutova, Jevita Potheegadoo, Sara Stampacchia, Léa Duong Phan Thanh, Marie Maradan, Julien Bally, Vanessa Fleury, Judith Horvath, Benoît Wicki, Paul Krack, Fosco Bernasconi, Olaf Blanke

## 22 Influence of attention mechanisms on cerebellar and basal ganglia activity during vocal emotion decoding

Leonardo Ceravolo, Marine Thomasson, Ioana Medeleine Constantin, Emma Stiennon, Émilie Chassot, Jordan Pierce, Alexandre Cionca, Didier Grandjean, Lukas Sveikata, Frédéric Assal, Julie Péron

## 23 Dynamic Seed-to-Whole-Brain Mapping Reveals Distinct Striatal Hubs Associated with Apathy Subtypes in Parkinson's Disease

Halima Rafi, Jevita Potheegadoo, Fosco Bernasconi, Dimitri Van De Ville, and Olaf Blanke