Dear Colleagues,

MR proton spectroscopy is a long known method in radiological examinations, which provides valuable additional diagnostic information. Nevertheless it is not used in many radiological sites due to a lack of experience with the measurement sequences and the evaluation technique.

In our workshop, several specialists of spectroscopic measurements in neuroradiological applications will share their experiences and approaches to this technique.

The workshop focuses on the most common applications. In addition, there will be several reports on current research projects using proton spectroscopy in neuroradiological topics.

We are pleased to invite you to our MR workshop in the University Hospital of Tübingen.

Prof. Dr. U. Klose  Prof. Dr. U. Ernemann

Program

Friday, 19.2.2016

4.00 pm  First session
Ulrike Ernemann, Tübingen: Welcome address
Uwe Klose: Overview of the workshop topics
Lily Varaki: Added information from MR spectroscopy in the evaluation of brain tumors: Challenges in daily clinical practice
Adriane Gröger: Intra-individual comparison of metabolic patterns in chronic multiple sclerosis lesions and normal appearing white matter using 2D MRSI
Barbara. Bobek-Billewicz: Proton spectroscopy in spinal cord lesions
Michael Gottschalk: Short echo-time spectroscopy of glioma with detection of glutamine and glutamate
Anke Henning: Applications of 2D J-resolved MRS in neurological and psychiatric disorders
Steffi Dreha-Kulaczewski: MR Spectroscopy in Pediatric White and Gray Matter Diseases

6.30 pm Light meal and get-together
### Program

**Saturday, 20.2.2016**

**9.00 am  Second session**

Benjamin Bender: Imaging and spectroscopic findings in hydroxyglutaric aciduria  
Monika Dezortova: MRI and MRS findings in ADHD patients  
Samuel Gröschel: MRS in Metachromatic Leukodystrophy  
Adam Berrington: 2-HG detection in gliomas using a semi-LASER sequence  
Adriane Gröger: Pitfalls in the quantitative analysis of spectra using Syngo and LCModel  
Uwe Böttcher: MR proton spectroscopy post-processing with syngo.via

**11.00 am Coffee break**

**11.30 am Third session**

Urs peter Knecht: Automatic Quality Evaluation in MRS  
Anett Werner: GABA quantification in the brain using a MEGA-PRESS sequence. Methodical considerations and first results  
Simon Männlin: Improvement of lactate quantification by optimization of the LCModel basis data set  
Xiao-Qi Ding: Neurometabolic reaction on diet stress  
Prof. Irina Mader: Radiogenomics by proton magnetic resonance spectroscopy: integrative analysis of metabolites and genome-wide expression in glioblastomas  
Grzegorz Chadzynski: Metabolism of human brain tumors studied at 9.4T - first results

**1.30 pm  End of the workshop**

### Speakers

| Benjamin Bender MD  
| Dep. of Diagnostic and Interventional Neuroradiology, University Hospital Tübingen, Germany  
| Adam Berrington  
| FMRIB Centre, Oxford University, Great Britain  
| Prof. Barbara. Bobek-Billewicz MD  
| Radiodiagnostic Department, Maria Sklodowska-Curie Memorial Cancer Centre and Institute of Oncology, Gliwice, Poland  
| Uwe Böttcher PhD  
| Siemens Healthcare GmbH, Erlangen, Germany  
| Grzegorz Chadzynski PhD  
| Dep.of Biomedical Magnetic Resonance, University Hospital Tübingen, Germany  
| Monika Dezortova PhD  
| Institute for Clinical and Experimental Medicine, Prague, Czech Republic  
| Prof. Xiao-Qi Ding PhD MD, Institute of Diagnostic and Interventional Neuroradiology, Hannover, Medical School, Hannover, Germany  
| Steffi Dreha-Kulaczewski MD  
| Dep. of Pediatrics and Pediatric Neurology, University Hospital Göttingen, Germany  
| Prof. Ulrike Ernemann MD  
| Dep. of Diagnostic and Interventional Neuroradiology, University Hospital Tübingen, Germany  
| Michael Gottschalk PhD  
| Preclinical MRI systems, Lund University Bioimaging Center, Lund, Sweden  
| Adriane Gröger PhD  
| Dep. of Neurology, University Hospital Mainz, Germany  
| Samuel Gröschel MD  
| Dep. of Pediatric Neurology and Developmental Medicine, University Hospital Tübingen, Germany  
| Anke Henning PhD  
| Max-Planck-Institute for Biological Cybernetics, Tübingen |

### Speakers

| Prof. Uwe Klose PhD  
| Dep. of Diagnostic and Interventional Neuroradiology, University Hospital Tübingen, Germany  
| Urs peter Knecht MD,  
| Dep. of Diagnostic and Interventional Neuroradiology, Inselspital Bern, Switzerland  
| Prof. Irina. Mader MD  
| Dep. Neuroradiology, University Hospital Freiburg, Germany  
| Simon Männlin: cand.med.  
| Dep. of Diagnostic and Interventional Neuroradiology, University Hospital Tübingen, Germany  
| Prof. Lily Varaki MD, Neuroradiology Section, Metropolitan Hospital, Athens, Greece  
| Anett Werner PhD  
| Dep. of Neuroradiology, University Hospital Dresden, Germany |

### Registration

Anja Stierl  
Department of Diagnostic und Interventional Neuroradiology  
University Hospital Tübingen  
Hoppe-Seyler-Str. 3  
72076 Tübingen  
Phone: +49-7071-2983005  
neurorad-workshop@med.uni-tuebingen.de  
Workshop fee: 100 €

The workshop will be presumably accredited as training course by the Medical Association (Ärztekammer) Baden-Württemberg.

### Venue

**University Hospital Tuebingen**  
Building 410 (Childrens Hospital) Lecture Hall Tübingen, Germany