

CONTENTS

■ SPECTROSCOPIC METHODOLOGY

Full Papers

- Multitissue Assessment of In Vivo Postprandial Intracellular Lipid Partitioning in Rats Using Localized ^1H -[^{13}C] Magnetic Resonance Spectroscopy, Richard A. M. Jonkers, Tom R. Geraedts, Luc J. C. van Loon, Klaas Nicolay, and Jeanine J. Prompers 997
Published online 28 December 2011

- Role of Very High Order and Degree B_0 Shimming for Spectroscopic Imaging of the Human Brain at 7 Tesla, Jullie W. Pan, Kai-Ming Lo, and Hoby P. Hetherington 1007
Published online 28 December 2011

- Efficient Spectral Editing at 7 T: GABA Detection with MEGA-sLASER, Anna Andreychenko, Vincent O. Boer, Catalina S. Arteaga de Castro, Peter R. Luijten, and Dennis W. J. Klomp 1018
Published online 28 December 2011

■ PRECLINICAL AND CLINICAL SPECTROSCOPY

Full Papers

- The Assessment of the Quality of the Graft in an Animal Model for Lung Transplantation Using the Metabolomics ^1H High-Resolution Magic Angle Spinning NMR Spectroscopy, Malika A. Benahmed, Nicola Santelmo, Karim Elbayed, Nelly Frossard, Eric Noll, Mathieu Canuet, Julien Pottecher, Pierre Diemunsch, Martial Piotto, Gilbert Massard, and Izzie J. Namer 1026
Published online 9 December 2011

- Association of Estrogen Receptor, Progesterone Receptor, and Human Epidermal Growth Factor Receptor 2 Status with Total Choline Concentration and Tumor Volume in Breast Cancer Patients: An MRI and In Vivo Proton MRS Study, Rani G. Sah, Uma Sharma, Rajinder Parshad, Vurthaluru Seenu, Sandeep R. Mathur, and Naranamangalam R. Jagannathan 1039
Published online 28 December 2011

■ IMAGING METHODOLOGY

Rapid Communications

- Detection of Rapidly Exchanging Compounds Using On-Resonance Frequency-Labeled Exchange (FLEX) Transfer, Nirbhay N. Yadav, Craig K. Jones, Jiadi Xu, Amnon Bar-Shir, Assaf A. Gilad, Michael T. McMahon, and Peter C. M. van Zijl 1048
Published online 26 July 2012

- Quantitative Chemical Exchange Sensitive MRI Using Irradiation with Toggling Inversion Preparation, Tao Jin and Seong-Gi Kim 1056
Published online 6 August 2012

Full Papers

- Four-Dimensional Flow MRI Using Spiral Acquisition, Andreas Sigfridsson, Sven Petersson, Carl-Johan Carlhäll, and Tino Ebbers 1065
Published online 8 December 2011

- CEST Phase Mapping Using a Length and Offset VARied Saturation (LOVARS) Scheme, Xiaolei Song, Assaf A. Gilad, Suresh Joel, Guanshu Liu, Amnon Bar-Shir, Yajie Liang, Michael Gorelik, James J. Pekar, Peter C. M. van Zijl, Jeff W. M. Bulte, and Michael T. McMahon 1074
Published online 13 January 2012

- Decoupled Circular-Polarized Dual-Head Volume Coil Pair for Studying Two Interacting Human Brains with Dyadic fMRI, Ray F. Lee, W. Dai, and J. Jones 1087
Published online 28 December 2011

- Volumetric Navigators for Real-Time Motion Correction in Diffusion Tensor Imaging, A. Alhamud, M. Dylan Tisdall, Aaron T. Hess, Khader M. Hasan, Ernesta M. Meintjes, and André J.W. van der Kouwe 1097
Published online 13 January 2012

- Slice-By-Slice B_1^+ Shimming at 7 T, Andrew T. Curtis, Kyle M. Gilbert, L. Martyn Klassen, Joseph S. Gati, and Ravi S. Menon 1109
Published online 27 December 2011

- Patient-Individual Local SAR Determination: In Vivo Measurements and Numerical Validation, T. Voigt, H. Homann, U. Katscher, and O. Doessel 1117
Published online 28 December 2011

- Fast Cardiac T_1 Mapping in Mice Using a Model-Based Compressed Sensing Method, Wen Li, Mark Griswold, and Xin Yu 1127
Published online 9 December 2011

- Pseudocontinuous Arterial Spin Labeling with Optimized Tagging Efficiency, David D. Shin, Thomas T. Liu, Eric C. Wong, Ajit Shankaranarayanan, and Youngkyoo Jung 1135
Published online 3 January 2012

CONTENTS

Reconstruction of MRI Data Encoded by Multiple Nonbijective Curvilinear Magnetic Fields, Fa-Hsuan Lin, Thomas Witzel, Gerrit Schultz, Daniel Gallichan, Wen-Jui Kuo, Fu-Nien Wang, Juergen Hennig, Maxim Zaitsev, and John W. Belliveau 1145
Published online 13 January 2012

Imaging with Positive T_1 -Contrast Using Superstimulated Echoes, Jürgen Hennig, Kamil A. Il'yasov, and Matthias Weigel 1157
Published online 21 December 2011

Null Space Imaging: Nonlinear Magnetic Encoding Fields Designed Complementary to Receiver Coil Sensitivities for Improved Acceleration in Parallel Imaging, Leo K. Tam, Jason P. Stockmann, Gigi Galiana, and R. Todd Constable 1166
Published online 21 December 2011

Denoising Sparse Images from GRAPPA Using the Nullspace Method, Daniel S. Weller, Jonathan R. Polimeni, Leo Grady, Lawrence L. Wald, Elfar Adalsteinsson, and Vivek K. Goyal 1176
Published online 28 December 2011

The Effect of Concomitant Gradient Fields on Diffusion Tensor Imaging, C. A. Baron, R. M. Lebel, A. H. Wilman, and C. Beaulieu 1190
Published online 3 January 2012

In Vivo Chromium-Enhanced MRI of the Retina, Kevin C. Chan, Shu-Juan Fan, Iris Y. Zhou, and Ed X. Wu 1202
Published online 28 December 2011

View Angle Tilting Echo Planar Imaging for Distortion Correction, Sinyeob Ahn and Xiaoping P. Hu 1211
Published online 28 December 2011

Notes
Time-Varying View Angle Tilting with Spiral Readout Gradients, Sang-Young Zho and Dong-Hyun Kim 1220
Published online 28 December 2011

Keyhole Chemical Exchange Saturation Transfer, G. Varma, R. E. Lenkinski, and E. Vinogradov 1228
Published online 13 January 2012

Overcoming the Low Relaxivity of Gadofosveset at High Field with Spin Locking, O. C. Richardson, M. L. J. Scott, S. F. Tanner, J. C. Waterton, and D. L. Buckley 1234
Published online 9 December 2011

Distortion Correction in EPI at Ultra-High-Field MRI Using PSF Mapping with Optimal Combination of Shift Detection Dimension, Se-Hong Oh, Jun-Young Chung, Myung-Ho In, Maxim Zaitsev, Young-Bo Kim, Oliver Speck, and Zang-Hee Cho 1239
Published online 27 December 2011

Reference-Free Unwarping of EPI Data Using Dynamic Off-Resonance Correction with Multiecho Acquisition (DOCMA), Eelke Visser, Benedikt A. Poser, Markus Barth, and Marcel P. Zwiers 1247
Published online 3 January 2012

Inherent Correction of Motion-Induced Phase Errors in Multishot Spiral Diffusion-Weighted Imaging, Trong-Kha Truong, Nan-kuei Chen, and Allen W. Song 1255
Published online 28 December 2011

■ PRECLINICAL AND CLINICAL IMAGING

Rapid Communication
Hyperpolarized Singlet NMR on a Small Animal Imaging System, Christoffer Laustsen, Giuseppe Pileio, Michael C. D. Taylor, Lynda J. Brown, Richard C. D. Brown, Malcolm H. Levitt, and Jan H. Ardenkjaer-Larsen 1262
Published online 31 July 2012

Full Papers
Evaluation of Combined Bevacizumab Plus Irinotecan Therapy in Brain Tumors Using Magnetic Resonance Imaging Measures of Relative Cerebral Blood Volume, Kimberly R. Pechman, Deborah L. Donohoe, Devyani P. Bedekar, Shekar N. Kurpad, and Kathleen M. Schmainda 1266
Published online 28 December 2011

Pharmacological MRI of the Choroid and Retina: Blood Flow and BOLD Responses During Nitroprusside Infusion, Yen-Yu I. Shih, Guang Li, Eric R. Muir, Bryan H. De La Garza, Jeffrey W. Kiel, and Timothy Q. Duong 1273
Published online 19 December 2011

Comparison of Two Ultrashort Echo Time Sequences for the Quantification of T_1 Within Phantom and Human Achilles Tendon at 3 T, Peter Wright, Vladimir Jellus, Dennis McGonagle, Matthew Robson, John Ridgeway, and Richard Hodgson 1279
Published online 13 January 2012

Notes
Detecting Brown Adipose Tissue Activity with BOLD MRI in Mice, Arjun Khanna and Rosa T. Branca 1285
Published online 9 January 2012

Magnetization Transfer MRI in Pancreatic Cancer Xenograft Models, Weiguo Li, Zhuoli Zhang, Jodi Nicolai, Guang-Yu Yang, Reed A. Omary, and Andrew C. Larson 1291
Published online 28 December 2011

■ COMPUTER PROCESSING AND MODELING

Rapid Communication
Monte Carlo Simulations of Donnan Equilibrium in Cartilage, Jenny Algotsen, Torbjörn Åkesson, and Jan Forsman 1298
Published online 13 August 2012

CONTENTS

Full Paper

- Intervention-Based Multidimensional Phase Unwrapping Using Recursive Orthogonal Referring,** Junmin Liu and Maria Drangova 1303
Published online 9 January 2012

■ HARDWARE AND INSTRUMENTATION

Rapid Communications

- Increasing Signal Homogeneity and Image Quality in Abdominal Imaging at 3 T with Very High Permittivity Materials,** P. de Heer, W. M. Brink, B. J. Kooij, and A. G. Webb 1317
Published online 31 July 2012

- Design and Evaluation of a Detunable Water-Based Quadrature HEM₁₁ Mode Dielectric Resonator as a New Type of Volume Coil for High Field MRI,** Sebastian A. Aussenofer and Andrew G. Webb 1325
Published online 6 August 2012

Full Paper

- Flexible Transceiver Array for Ultrahigh Field Human MR Imaging,** Bing Wu, Xiaoliang Zhang, Chunsheng Wang, Ye Li, Yong Pang, Jonathan Lu, Duan Xu, Sharmila Majumdar, Sarah J. Nelson, and Daniel B. Vigneron 1332
Published online 13 January 2012