



Beth Israel Deaconess  
Medical Center



HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL

**Whole brain inhomogeneous Magnetization Transfer (ihMT) imaging at 3T: concentrating RF power to mitigate RF inhomogeneities effects**

Samira Mchinda, **Gopal Varma**, Robin Draveny, Arnaud Le Troter, Victor Carvalho, Valentin Prevost, Maxime Guye, Jean Pelletier, Jean-philippe Ranjeva, **David Alsop**, Guillaume Duhamel, Olivier Girard

**Towards short dipolar relaxation time, T1D, MRI**

**Gopal Varma**, **Patricia Coutinho de Souza**, Valentin Prevost, Olivier Girard, Victor Carvalho, Samira Mchinda, Leo Tsai, Guillaume Duhamel, **Aaron Grant**, **David Alsop**

**Dipolar relaxation time (T1D) mapping to assess myelin in vivo**

Victor Carvalho, Olivier Girard, Valentin Prevost, Samira Mchinda, **Gopal Varma**, **David Alsop**, Pierre Thureau, Guillaume Duhamel

**3D inhomogeneous magnetization transfer and rapid gradient echo (ihMTRAGE) imaging**

**Gopal Varma**, Olivier Girard, Samira Mchinda, Arnaud Guidon, Dan Rettmann, Victor Carvalho, Valentin Prevost, Pauline Worters, Marc Lebel, Guillaume Duhamel, **David Alsop**

**Inhomogeneous Magnetization Transfer (ihMT) sensitivity to myelin impairments in cuprizone mouse model**

Valentin Prevost, Myriam Cayre, Victor Carvalho, Samira Mchinda, **Gopal Varma**, Jean Philippe Ranjeva, Jean Pelletier, **David Alsop**, Pascale Durbec, Olivier Girard, Guillaume Duhamel

**Improved Hyperpolarized Cerebral Perfusion Imaging Using a Sucrose/Water Glassing Matrix for tert-Butanol**

**Gopal Varma**, **Patricia Coutinho de Souza**, Cody Callahan, **David Alsop**, **Aaron Grant**

**Correlation of CD31-Based Microvessel Density and Percent Area Measurements against 13C-tert-butanol MRI Perfusion Mapping in a Sunitinib-Resistant RCC Xenograft**

**Patricia Coutinho de Souza**, **Aaron Grant**, Xiaoen Wang, Rupal Bhatt, **Gopal Varma**, **David Alsop**, Leo Tsai

**Characterizing the sensitivity of ihMT for various dipolar relaxation times (T1D) at high RF power using frequency-alternated and cosine-modulated RF pulses for dual frequency-offset saturation**

Guillaume Duhamel, Samira Mchinda, Valentin Prevost, Victor Carvalho, **Gopal Varma**, **David Alsop**, Olivier Girard

**Reducing Blurring while Controlling Contrast in Abdominal Imaging with Variable Flip Angle Single Shot Fast Spin Echo**

**LI Zhao, Manuel Taso, Daniel Litwiller, David Alsop**

**Accelerated volumetric renal perfusion using pseudo-continuous ASL and a 3D Fast-Spin-Echo readout with Compressed Sensing**

**Manuel Taso, Li Zhao, Arnaud Guidon, Daniel Litwiller, David Alsop**

**In vivo visualization of white and gray matter sub-structures using fast quantitative T1 mapping of the human spinal cord at 7T with 300- $\mu$ m in-plane resolution**

**Aurélien Massire, Henitsoa Rasoanandrianina, Manuel Taso, Arnaud Le Troter, Maxime Guye, Jean-Philippe Ranjeva, Virginie Callot**

**Pancreas perfusion and transit-time measurement using pseudo-continuous ASL**

**Manuel Taso, Arnaud Guidon, Li Zhao, Koenraad Mortelet, David Alsop**

**Influence of background suppression and retrospective realignment on free-breathing renal perfusion imaging using ASL**

**Manuel Taso, Arnaud Guidon, David Alsop**

**Assessment of Distant Tumor Stimulation from Liver Radiofrequency Ablation in a Rat Breast Carcinoma Model using Hyperpolarized  $^{13}\text{C}$ -Pyruvate MRI**

**Joseph Goodwin, David Mwin, Patricia de Souza, Svayam Dialani, John Moon, Aaron Grant, Muneeb Ahmed, Leo Tsai**

**Resting-state Brain Networks using Spectral Clustering Analysis**

**Jason Barrett, Haomiao Meng, Song Chen, Li Zhao, David Alsop, Xingye Qiao, Weiyang Dai**

**Abnormal Perfusion and Perfusion fluctuation in Bipolar Disorder measured by ASL**

**Weiyang Dai, Mingzhao Chen, Li Zhao, Nicolas Bolo, David Alsop, Keshavan Matcheri**

**Improved Efficacy of Cerebellar fMRI at 7T with Dielectric Pads Extending the Imaging Region of a Commercial Head Coil**

**Manushka Vaidya, Mariana Lazar, Cem Deniz, Gillian Haemer, Gang Chen, Mary Bruno, Daniel Sodickson, Riccardo Lattanzi, Christopher Collins**

**Characterization of the perfusion and Arterial Transit Time of the choroid plexus with Arterial Spin Labeling**

**Li Zhao, David C. Alsop**

**Reducing blurring while controlling contrast in abdominal imaging with variable flip-angle single-shot Fast Spin Echo**

**Li Zhao, Manuel Taso, Daniel V. Litwiller, David C. Alsop**

**Effect of Antiepileptic Treatment on Hippocampal Activity in Alzheimer's Disease measured by ASL**

Weiyang Dai, Song Chen, **Li Zhao**, **David Alsop**, Daniel Press

**Neural basis of global resting-state ASL perfusion signals**

Weiyang Dai, Wen-Ming Luh, Wenna Duan, **Li Zhao**, **David C. Alsop**

**3D Steady-State Inhomogeneous Magnetization Transfer (ihMT) Gradient Echo Sequence for Spinal Cord Imaging at 3T**

Ece Ercan, Marco C. Pinho, **Gopal Varma**, Ivan E. Dimitrov, Xinzeng Wang, Ananth J. Madhuranthakam, Robert E. Lenkinski, Elena Vinogradov

**SNR Evaluation for a high-permittivity dielectric helmet-shaped coil former for a 28 channel receive array**

Giuseppe Carluccio, Gillian Haemer, **Manushka Vaidya**, Sebastian Rupprecht, Qing Yang, Christopher Michael Collins

**Probing changes in lung physiology in COPD using CT, perfusion MRI and hyperpolarized xenon-129 MRI**

Kun Qing, Nicholas J. Tustison, John P. Mugler, III, Jaime F. Mata, Zixuan Lin, **Li Zhao**, Da Wang, Xue Feng, Kai Ruppert, Talissa A. Altes, Joanne M. Cassani, Y. Michael Shim

**Exploring the performance of high density detector coil arrays at 10.5 Tesla**

Riccardo Lattanzi, **Manushka Vaidya**, Daniel K Sodickson, Kamil Uğurbil, Gregor Adriany

**Exploring how modeling the head as a multi-layered vs. uniform sphere affects ultimate intrinsic signal-to-noise ratio and coil performance prediction**

Jonghyun Bae, **Manushka V Vaidya**, Riccardo Lattanzi