

Multiple Postdoctoral Research Fellowship Positions in Hyperpolarized ^{13}C Metabolic Imaging

University of Maryland, Baltimore

The University of Maryland School of Medicine has expanded its molecular imaging and interventional research capabilities by establishing the Center for Metabolic Imaging and Therapeutics. The center houses a GE SpinLab™ dynamic nuclear polarizer suitable for preclinical and clinical applications, a new GE 3T 750w MR scanner, and an MR Solutions MRS 3017 Preclinical Benchtop MR scanner. The GE MR scanner is also integrated with two Insightec 1024-element high-intensity focused ultrasound (HIFU) systems for image-guided interventions. Our goal is to facilitate both basic science and clinical research by exploring novel molecular imaging agent-based technologies for screening, early disease detection and treatment response, and real-time image-guided interventions.

Multiple postdoctoral research fellowship positions are available in the metabolic imaging group led by Dr. Dirk Mayer. Specific areas of research include optimized acquisition and reconstruction techniques, kinetic modeling for quantitative analysis, and new probe development. These methods will be applied to animal models (e.g., traumatic brain injury, cancer, liver disease) with translation to patients scheduled for summer 2017. This is an exciting opportunity to work at one of the first sites that will do translational/clinical hyperpolarized ^{13}C MRI/MRS.

The candidate should have a Ph.D. (or equivalent degree) in engineering, physics, physical chemistry, or similar fields. The ideal candidate has a strong background in NMR physics with particular emphasis on in vivo imaging and/or spectroscopy, data acquisition and signal/image processing/analysis. Experience in pulse sequence programming (ideally on GE and/or MR Solutions scanners), knowledge of computer languages, such as C++, Matlab and IDL, and experience in performing small animal imaging is also desirable. Qualified applicants should also have a track record of peer-reviewed publications.

Interested individuals should send a letter detailing their research interests, an updated CV and contact information for at least two references to Dirk Mayer, Ph.D. (dmayer@som.umaryland.edu, also attending the ISMRM Annual Meeting in Honolulu).

