MASSACHUSETTS GENERAL HOSPITAL

HARVARD MEDICAL SCHOOL

Postdoctoral Fellowship: Imaging of Microvascular Function in Aging and Alzheimer's Disease

The Cerebrovascular Aging and Spin Labeling (CASL) Lab is soliciting applications for an open postdoctoral position in our group. The appointment would be as a Research Fellow at the Athinoula A. Martinos Center for Biomedical Imaging, which is housed in the Department of Radiology at Massachusetts General Hospital and Harvard Medical School. The successful candidate will contribute to a funded project that involves the application of arterial spin labeling (ASL) MRI-based approaches for studying how aging and elevated genetic risk for Alzheimer's disease interact to influence cerebral microvascular physiology. Training opportunities in this role range from novel applications of existing techniques aimed at better understanding microvascular physiology to the development of novel methods for imaging hemodynamics and neurofluids. Opportunities are also available to contribute to other ongoing projects involving one or more of the following topics based on interest:

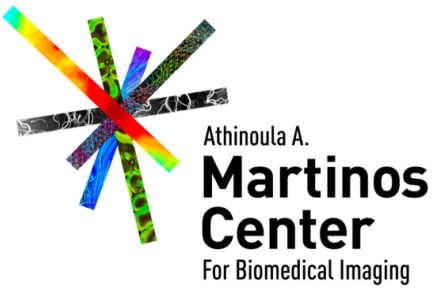
1. Development of multi-modal imaging markers for better characterizing white matter lesions in aging using advanced computational methods.
2. Application of noninvasive MRI approaches for investigating hemodynamic impairment in clinical pathologies, including arterial steno-occlusive disease and sickle cell disease.
3. Advancement of the utility of ASL using high-field and high-performance MRI systems through close collaboration with experts in MRI hardware and pulse sequence development.

Qualifications:

- Ph.D. (or equivalent) in engineering, neuroscience, computer science, or related discipline
- Prior experience with perfusion MRI (preferred) or other MRI-related research
- Strong written and oral communication skills in English
- Experience with conducting human subject research (preferred)

Environment:

The Martinos Center for Biomedical Imaging houses a state-of-the-art imaging facility with eight research-dedicated human MRI systems. This stable includes four 3 Tesla MRI scanners (including the high-performance "Connectome 2.0" system), two 7 Tesla MRI scanners, and two 3 Tesla PET/MRI scanners. A wide range of research and training resources are also available alongside a rich selection of seminar series and grassroots initiatives on topics such as research productivity and commercialization. Finally, the full career development infrastructure at Massachusetts General Hospital and Harvard Medical School (including support from the Harvard Catalyst program) will be made available as needed.



Application:

Informal inquiries are welcome, either via email or in person at the 2025 ISMRM Annual Meeting in Honolulu. Candidates interested in submitting a formal application should email a **Curriculum Vitae** (with names and contact information for three references) and a brief (1-2 page) **Research Statement** (describing the candidate's prior experiences and current interests) to Meher R. Juttukonda, Ph.D. (mjuttukonda@mgh.harvard.edu).

Massachusetts General Hospital is an equal opportunity employer, and all qualified applicants will receive consideration without regard to race, color, religion, sex, national origin, disability status, protected veteran status, or any other characteristic protected by law.