

NIH POSTDOCTORAL POSITION AVAILABLE

Magnetic Resonance Neuroimaging

A postdoctoral position in magnetic resonance neuroimaging is available immediately within the Magnetic Resonance Physics of Aging and Dementia (MRPAD) Unit at the National Institute on Aging (NIA) of the National Institutes of Health (NIH), located in Baltimore, Maryland. Successful candidate will be involved in a large research initiative targeting:

- The development of quantitative MR acquisition and analysis techniques for quantitative neuroimaging. This includes relaxometry and diffusion analyses, image denoising, parameters estimation, etc.
- The quantification of central nervous system (CNS) demyelination, axonal damage, iron accumulation, cerebral blood flow deficits, sodium concentration, and metabolite changes in normative aging, mild cognitive impairment, and dementia.
- Identification of cognitive and functional correlates of CNS findings.

Work will center on spectroscopic and imaging studies of the CNS in human subjects drawn primarily from the Baltimore Longitudinal Study of Aging (BLSA) and the Genetic and Epigenetic Signatures of Translational Aging Laboratory Testing (GESTALT) populations, landmark studies of the NIA Intramural Research Program, and in nonhuman primates and small animal models. MR results will be correlated with a wide range of biological, genetic, metabolic, and functional outcomes to explore the basis and consequences of cerebral functional, structural, and metabolic changes that occur with age and dementia. Other research opportunities may be available depending upon the interests and background of the successful candidates.

This is an excellent opportunity to conduct innovative imaging research as a member of a team of technical and clinical experts with access to state-of-the-art imaging equipment, including our research-dedicated 3T whole-body Philips MRI system, capable of both proton and heteronuclear imaging, a double-resonance Bruker 7T/30 cm Biospec Avance III HD system for preclinical studies, and a triple-resonance vertical wide-bore 9.4T Bruker Avance III spectrometer with microimaging and solids capability. In addition, we plan to install an additional ultra-high field MRI instrument, a 7T Siemens human system, in 2023 for clinical studies of aging.

The candidate should have a Ph.D. in physics, neuroscience, engineering, computer science, mathematics, statistics, or a related field. The appointment will be as an IRTA Postdoctoral Fellow for US citizens or as a Visiting Fellow for non-citizens. The successful applicant will be guaranteed a stipend for two years (including family health insurance full coverage at no cost), with the option to renew annually up to a maximum of five years. The starting date for this position is very flexible and can be discussed.

Interested individuals should e-mail get in contact with Dr. Mustapha Bouhrara, Chief of the MRPAD Unit, bouhraram@mail.nih.gov

The NIH is an equal opportunity employer. Minorities and women are especially encouraged to apply.