Position Type: Postdoctoral Position at the NIH
Position Title: Studying neurodegeneration in humans using multidimensional MRI

Position description:
The Multiscale Imaging and Integrative Biophysics (MiIB) Unit within the National Institute on Aging’s (NIA’s) Laboratory of Behavioral Neuroscience is offering a postdoctoral position to study neurodegeneration in humans. This is a full-time primary research fellowship for postdoctoral scholars, which will be mentored by Dr. Dan Benjamini. The MiIB Unit combines pre-clinical and clinical diffusion-relaxation multidimensional MRI with complementary histological methods to investigate cellular processes that relate to function, microstructure, and chemical composition in normative aging, mild cognitive impairment, and dementia.

- Develop novel MRI methods targeting specific pathologies, with focus on neurodegenerative diseases and neuroinflammation.
- Develop, explore and apply advanced multidimensional MRI clinical sequences to map pathological biomarkers.
- Combine ex- and in-vivo neuroimaging, proteomics, blood biomarkers, and complementary modalities to study disease progression.

Environment: MiIB is part of the larger MRI research community at NIA, which has active programs in clinical and preclinical research. Among the available resources are preclinical 7T and 9.4T animal scanners, preclinical 9.4T tissue scanner, and clinical 3T and soon-to-be-installed 7T scanners. Additionally, two major ongoing research initiatives at the NIA, the Baltimore Longitudinal Study on Aging (BLSA) and the Genetic and Epigenetic Signatures of Translational Aging Laboratory Testing (GESTALT), present unique opportunities for multimodal integrated research.

Qualifications:
- Ph.D. in a relevant engineering, physical science, computer science or mathematics discipline.
- First-hand experience with the acquisition and/or analysis of MRI data.
- Background in MRI physics and image processing.
- Pulse-sequencing (Bruker/Siemens/Philips) – advantage.
- Evidence of excellent written and oral communication skills.
- Solid programming skills: including MATLAB, Python, and C/C++.

Compensation: Salary is consistent with NIH guidelines and benefits include health, dental and vision insurances, paid time-off, and conference time. The duration of postdoctoral fellowship appointments can be for up to five years. International applicants are welcomed.

How to Apply: Interested applicants should contact Dr. Dan Benjamini (dan.benjamini@nih.gov) and submit: (1) a curriculum vitae (CV), (2) a bibliography, (3) a cover letter with a brief description of his/her research interests and experiences, and (4) a list of at least three references, which includes their mailing addresses, telephone numbers, and e-mail addresses.

Employer Name: National Institute on Aging (NIA)
Position Location: Baltimore, Maryland
Application Deadline Date: September 30, 2022, or until filled.

DHHS and NIH are Equal Opportunity Employers. The NIH is dedicated to building a diverse community in its training and employment programs and encourages the application and nomination of qualified women, minorities, and individuals with disabilities.