The Section on Quantitative Imaging and Tissue Sciences, Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), is soliciting applications from post-doctoral level scientists interested in the following positions:

**POST-DOCTORAL FELLOWSHIP OPPORTUNITY IN BRAIN IMAGING**
Developing and implementing novel MRI methods to assess brain structure and function. Applications include detection of mTBI, inflammatory processes, glymphatic transport, and/or spreading depression. Knowledge of MRI physics and previous experience with conducting human MRI studies is highly desirable. Experience with pulse sequence programming on GE, Siemens, and/or Philips clinical MRI scanners is also desired.

**POST-DOCTORAL FELLOWSHIP OPPORTUNITY IN TRANSLATIONAL MRI**
Developing, implementing, and translating quantitative MRI methods from bench-to-bedside. Examples include “microstructure and microdynamics imaging” applications, such as multiple-pulsed-field gradient (mPFG) MRI, and multi-dimensional diffusometry and relaxometry MRI. Knowledge of MRI physics and previous experience with conducting human MRI studies are highly desirable. Experience with pulse sequence programming on GE, Siemens, and/or Philips clinical MRI scanners is also desired.

**POST-DOCTORAL FELLOWSHIP OPPORTUNITY IN IMAGING AND DATA SCIENCES APPLIED TO COMPUTATIONAL NEUROSCIENCE**
Developing and implementing novel computer and imaging science-based strategies for virtual cyto-architectonic parcellation of the brain using data acquired with MRI and other imaging modalities. Examples include inferring meaningful correlations between histology and MRI data; and segmenting, clustering, and classifying high-dimensional MRI data obtained in brain and spinal cord tissue.

**POST-DOCTORAL FELLOWSHIP OPPORTUNITY IN POROUS MEDIA MR PHYSICS FOR MICROSTRUCTURE AND MICRODYNAMIC IMAGING APPLICATIONS**
Developing and implementing quantitative MRI for eventual migration to pre-clinical and clinical “microstructure and microdynamic imaging” applications. Candidates with knowledge of porous media physics, materials sciences, continuum mechanics, mathematical and computational modeling, and NMR and MRI physics are sought. Previous pulse sequence programming experience with Bruker 7T and 14T scanners is desirable.

The Post-doctoral fellow appointment would be made under an Intramural Research Training Award (IRTA) for U.S. citizens or permanent residents, or under a Visiting Fellow (VF) award for non-US citizens.

**Qualifications:**

- Applicants must possess a M.D. and/or a Ph.D. or D.Sc. in physics, electrical engineering, biomedical engineering or a related field, and have completed fewer than five years of post-doctoral training.
- Both excellent written and oral communication skills are required, as is the ability to work independently and in a collaborative manner with a diverse group of scientists and clinicians.
How to Apply:
Interested applicants should first contact Dr. Peter Basser at pjbasser@helix.nih.gov. Successful applicants will eventually be required to submit: (1) a curriculum vitae (CV), (2) a bibliography, (3) a cover letter with a description of his/her research experience and interests, and (4) a list of at least three references that includes their mailing address, telephone number and e-mail address. Additional information and useful links about post-doctoral fellowship training positions at the NIH can be found at https://www.training.nih.gov/resources/faqs/postdoc_irp.

The NIH is dedicated to building an inclusive and diverse community in its training and employment programs.

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