HJF is seeking a **Postdoctoral Fellow** to support the Center for Neuroscience and Regenerative Medicine (CNRM), located in Bethesda, MD. HJF provides scientific, technical and programmatic support services to CNRM.

The CNRM [https://www.usuhs.edu/cnrm](https://www.usuhs.edu/cnrm) is looking for a talented and highly motivated post-doctoral fellow for an exciting high risk, high reward project. You will have the opportunity to lead development and testing of new MRI methods for detecting cortical spreading depolarizations noninvasively in humans, with validation studies in experimental animals. The position will be part of the CNRM human imaging core facility, headed by Dr. Dzung Pham and Dr. John Butman, and the CNRM translational imaging core facility, headed by Dr. Bernard Dardzenski. [https://www.usuhs.edu/cnrm/coresindex](https://www.usuhs.edu/cnrm/coresindex)

Additional mentorship and intellectual support will be provided by Dr. David Brody, the director of the CNRM; Dr. Peter Basser, one of the world’s leaders in diffusion MRI at the NIH; Dr. Lawrence Latour, leader of a major stroke and TBI acute imaging project at the NIH; and Dr. Jed Hartings, one of the world’s leaders in the study of cortical spreading depolarizations at the University of Cincinnati [http://www.cosbid.org/](http://www.cosbid.org/)

We will initially focus on developing fast diffusion imaging methods with the goal of detecting waves of restricted diffusion associated with cortical spreading depolarizations. High spatial resolution BOLD methods and other creative ideas will also be considered. We envision a technical development phase in animal models, followed by clinical validation in migraine with aura patients and large hemispheric stroke patients. The ultimate goal will be to characterize cortical spreading depolarizations in traumatic brain injury patients with neurological auras, and use these characterizations for pharmacodynamic assessments of the effects of candidate therapeutics.

The position will be based jointly at the NIH clinical center and Uniformed Services University, both in Bethesda, Maryland. There will be a requirement to travel frequently to work with Dr. Jed Hartings at the University of Cincinnati in Ohio. There will also be opportunities to travel around the world to work directly with other collaborators in the United States, Europe, and Asia. The NIH and Uniformed Services University constitute a vibrant intellectual environment with unparalleled MRI and clinical research resources.

Applicants are required to apply directly to this posting, however, you may also submit a brief statement of research activities and interests, a current CV, and names and contact information of at least three references to Dr. David Brody: [David.brody@nih.gov](mailto:David.brody@nih.gov).

**Responsibilities**

1. Participate in the development, and implementation of novel MRI methods.
2. Apply the developed MRI techniques to characterize cortical spreading depolarization in animal models, as well as in healthy and patient populations.
3. Work in a team-oriented, multi-institutional environment that is objective-driven.
4. Meticulous attention to detail and record keeping of experimental procedures.

**Required Education, Knowledge & Skills**
1. Ph.D or equivalent degree in biomedical engineering, electrical engineering, biophysics, or similar field.
2. Solid understanding of MRI pulse protocol design and implementation
3. Strong analytical skills, including the ability to write new software to perform customized data analyses.
4. Comfortable working with both clinical and animal research studies
5. Excellent communication and interpersonal skills.
6. Willingness to work flexible hours to make efficient progress.
7. Mature, calm, and logical approach to both independent and team-oriented problem solving.

Minimum Experience: 0-2 years

Start date can be as early as March 1, 2018.

HJF is an equal opportunity and affirmative action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, or protected veteran status.