



## **Post-Doctoral Fellowship in Therapeutic Ultrasound and the Blood Brain Barrier**

With nation-wide responsibility for improving the health and well being of all Americans, the Department of Health and Human Services oversees the biomedical research programs of the National Institutes of Health and those of NIH's research Institutes.

The Frank Laboratory in the Clinical Center and National Institute of Biomedical Imaging and Bioengineering, NIH is accepting applications for a two-three-year research fellowship position for qualified Ph.D., M.D. or MD/Ph.D. candidates interested with Radiology, Imaging Sciences or Biomedical Engineering background to investigating the molecular and cellular effects of focused ultrasound (FUS) with microbubble (MB) infusion on the blood brain barrier and neurovascular unit (NVU). This research will explore the mechanotransductive effects of pFUS+MB on the brain microenvironment deconstructing the shockwaveinduced changes on the various cellular elements of the NVU in transgenic models. The research will focus on optimizing the coverage of the canvas of brain pathologies. The research will serve as basis for enhances homing of stem cells as part of an immunotherapy in treating CNS disease, traumatic brain injury and malignancy. We are looking for an individual with experience in various (focused and unfocused) US techniques, biomedical engineering, imaging sciences, pharmacology to explore in a range of experimental models (i.e., Brain, Neurodegenerative diseases, Brain Tumors, TBI and Stroke) that will serve as proof of concept of pFUS to facilitate innovative therapeutic strategies. One major research interest is to translate pFUS techniques developed in the lab and bringing the technology forward to clinical trials. The lab is well equipped with a MRI compatible FUS system, Ultrasound based FUS System, home built FUS units, 3T MRI scanner, 7T MR microimager, MicroPET/MicroCT as well as access to 9.4T MRI and bioluminescent imager in the NIH mouse imaging facility. The lab is also equipped as a cellular and molecular biology laboratory with confocal and scanner microscopes.

Salary for positions is commensurate with experience. Candidates should send a cover letter, curriculum vitea and names and addresses of three references to:

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Frank Laboratory  
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Closing Date: January 31, 2018.