Postdoctoral position on focused ultrasound neurostimulation for spinal cord repair

The Department of Neurology and Radiology at Stanford University seeks applications for a postdoctoral researcher to work on the development of new focused ultrasound neurostimulation approach for promoting neurorepair of the spinal cord in models of Multiple Sclerosis. We are seeking a highly motivated, independent, hands-on and creative physicist or engineering PhD, with outstanding work ethics to conduct pioneering ultrasound research. The supervisor and the lab will be with Prof Larry Steinman from the Department of Neurology and Prof Kim Butts-Pauly, from the department of Radiology. For more information on each lab: 
Prof Larry Steinman  
https://med.stanford.edu/steinmanlab/lawrence_steinman.html  
Prof Kim Butts-Pauly  
https://med.stanford.edu/kbplab.html

The successful candidate will be responsible for 1) conducting focused-ultrasound (FUS) therapy in preclinical models of spinal cord damage due to autoimmune damage (Experimental Autoimmune Encephalomyelitis (EAE)) and 2) designing FUS neurostimulation protocols for humans using the MRI guided focused ultrasound Exablate Body system. The EAE model will be developed at Prof Steinman lab by his team and animals will be provided to the postdoc to be treated at Prof. Butts-Pauly lab. Once completed the therapy, animal phenotyping and pathology will be performed at Prof Steinman lab in collaboration with Prof. Villoslada.

This position involves full-time scholarship, as well as mentorship of other trainees, and operations of state-of-the-art ultrasound equipment / acoustic measurements setups, including

The tasks associated with these two responsibilities include
- Perform preclinical focused-ultrasound treatments, including preparation of the FUS systems for experiments
- Operate, adjust, and perform quality control of FUS systems for experiments
- Manage experimental schedules of the different FUS systems and keep records of their usage
- Contribute to data analysis and report writing

Qualifications:

**Education/Training**
- Ph.D. in Physics or (biomedical, electric) engineering or related technical field, with >2 years of experience in ultrasound field.
- Those wet lab and engineering design experience are especially encouraged to apply.
- Those with software development capabilities on MATLAB especially encouraged to apply.
Other
• Creative thinking, independent judgment, and critical analysis necessary for implementation of new equipment and procedures
• Demonstrated strong management and organizational skills
• Demonstrated strong mentorship and training skills
• Demonstrated initiative to meet competing deadlines and manage multiple activities
• Excellent interpersonal and oral/written communication skills
• Ability to develop and maintain cooperative, effective working relationships with students, faculty and staff
• Ability to develop instructional display materials, and to assist in the production of AV aids for teaching laboratories
• Knowledge of processes, regulations and policies for the Animal Care and Use Committee (ACUC) and the Human Subjects Research Protocols.
• Knowledge of the safety and Environmental, Health and Safety (EHS) procedures, processes, regulations and policies (requirements could be fulfilled by taking and successfully completing online Stanford training modules during the probationary employment period).

**This is a two-year term limited position**
This position will remain open until filled. This is a Non-Exempt level, benefited position. This position is a restricted position and is dependent upon project need, availability of funding and performance. The University will perform background checks on all new hires prior to employment.

To Apply:
Please contact Prof Steinman, Butts-Pauly or Villoslada for details until the official position is posted on Stanford website. Complete an application with the following documents to this email address: pvillos@stanford.edu
  • CV
  • Cover letter

COVID Vaccination Requirement
Due to the scope of President Biden’s Executive Order 14042 issued in early September, all University employees, including remote employees, must receive their final vaccination dose by January 4, 2022, unless they have a university-approved religious or medical exemption.