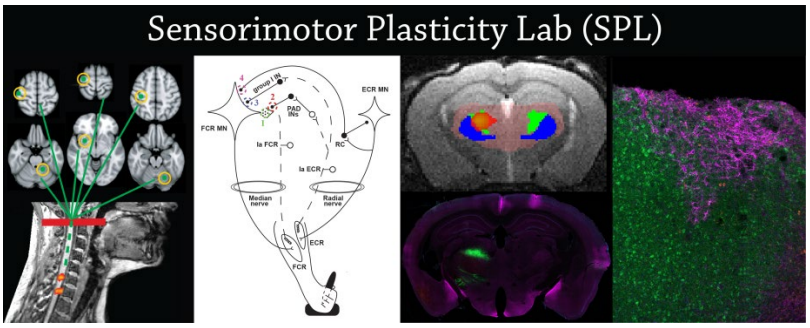

2. Postdoctoral Position in Neural Mechanisms of Motor Recovery after Stroke

One NIH-funded postdoctoral scholar position is available in the Sensorimotor Plasticity Lab at the University of Florida to study neural and behavioral mechanisms of motor recovery in mouse stroke models. The project involves cutting-edge techniques in rodent neuroimaging (fMRI, optogenetic stimulation, calcium imaging), behavioral shaping, stereotactic surgery, and data analysis.

Location: Department of Applied Physiology and Kinesiology, and McKnight Brain Institute at University of Florida, Gainesville, FL

Funding: Supported by an NIH-NINDS R01 grant, as well as funding from the State of Florida

Qualifications: The successful applicant must have a PhD degree in Neuroscience, Physiology, Biology, Biomedical Engineering, Psychology or related field. Extensive prior experience in working with rodents, electrophysiology or calcium imaging, and wet lab experience is required. Expertise in rodent neuroimaging (such as MRI acquisition/analysis) is a plus. Prior experience in behavioral shaping is a plus. Experience in mouse models of movement disorders is desirable. Strong understanding of neuroscience/sensorimotor system is desirable. We are seeking highly motivated, enthusiastic, and collaborative candidates.

Start date: June 2023 (negotiable)

Salary: NIH Scale

Applicants must send their CV (including contact information of two references; will be contacted if the candidate is shortlisted), and a cover letter outlining their background and career goals, and their suitability for the position (Position #2) to: svahdat@ufl.edu.

About Sensorimotor Plasticity Lab, Director: Dr. Shahab Vahdat, http://www.vahdatlab.org/

Our LAB AIM *is to push the boundaries of science in neuroplasticity forward, and help stroke patients to regain their lost motor function better, and faster!*

Our END GOAL *is to deliver an FDA-approved neurostimulation-based treatment to improve sensory-motor function in stroke patients!*

Our SCIENCE: Stroke does not only disrupt local brain function, but it also results in long-term changes to spinal cord circuits; some are beneficial, some maladaptive! We are interested in understanding how the brain and spinal cord circuits

interact and reorganize to support functional recovery in major motor impairments after stroke, such as, Force Control deficits and Spasticity**!**

Our Approach: In humans, we use simultaneous brain-spinal cord fMRI to characterize neural pathways between the brain and spinal cord, and how they change poststroke. *We use this knowledge to guide optogenetic stimulation of genetically-defined neuronal populations to retrain the motor circuit and induce desired neuroplasticity after stroke!* In rodents, we use optogenetics, calcium imaging and fMRI for cell-type specific stimulation and visualization of neural circuits. We design and build MR-compatible systems for fMRI in behaving mice to study brain and spinal cord reorganization following stroke and motor learning.