

POSTDOC OPPORTUNITY

Using Genetic Techniques (DREADDs) to Understand Afferent Contribution to Locomotion and Spinal Cord injury

Spence Lab, Department of Bioengineering, Temple University, Philadelphia
www.spencelab.com Contact: aspence@temple.edu

The Spence lab has a 3 year postdoctorate fellowship position available, starting January 1st, 2018. Funded by a Shriner's Hospitals for Children grant, the work will seek to use chemogenetic tools (DREADDs) to excite and inhibit specific classes of sensory afferents in walking rats to enhance recovery from a model spinal cord injury, and to understand the basic contribution of these afferents to movement in intact mammals. Our approach combines the latest in genetic techniques (chemogenetics using DREADDs, and potentially optogenetics) with a robotic treadmill and computer vision tracking for kinematics, to get at important basic and applied questions in motor control and spinal cord injury. Experience in areas of recovery surgery and rodent behavior, electrophysiology, spinal cord circuitry and afferent systems, and/or kinematics, computer vision and robotics, are all beneficial but not necessarily required; please contact aspence@temple.edu. The Spence lab is currently a vibrant group with four phd students and a host of undergraduate scholars, in the great city of Philadelphia, with strong ties to the Temple Medical School and Shriners Pediatric Neuroscience Research Center (Prof. G. Smith) and Prof. Michel Lemay's group within Bioengineering.

