

Postdoctoral positions for electrophysiologists (April 4, 2017)

The Charles E. Smith Family and Prof. Joel Elkes Laboratory for Collaborative Research in Psychobiology (Neurobiology/Neuroscience)

The Charles E. Smith family and Prof. J. Elkes laboratory for collaborative research in psychobiology (neurobiology/neuroscience) opened **two postdoctoral positions for electrophysiologists** to study neuronal properties and neuronal circuits in genetically-modified mouse models with impaired brain development and function. The highly sophisticated laboratory is located within the Life science Institute, adjacent to the Brain Institute at the Hebrew University of Jerusalem Israel (HUJI). The academic environment offers a vibrant community covering the field of neuroscience at multiple levels, ranging from the molecular, cellular, and electrophysiological to cognition.

The first project, entitled “**The timing mechanisms in the cerebellum as a drug target for autism spectrum disorders (ASD)**” will be carried out under the supervision of Prof. S. Shifman (HUJI), an expert on the genetic basis of ASD; Prof. Y. Yarom (HUJI) who studied cerebellar timing mechanisms, Prof. Inna Slutsky (Tel Aviv University) expert in cellular neurophysiology/biophysics and Prof. Y. Kohn, a child psychiatrist expert in ASD treatments (director of the Child and Adolescent Psychiatry Department in Eitanim Psychiatric Hospital). The working hypothesis is that at least some symptoms of ASD arise from malfunctions in the brain’s timing mechanism that resides in the cerebellar module. Accordingly, the research will be focused on identify the changes in cerebellar circuit and neuronal properties and examining possible therapeutic interventions.

The second project, titled: “**Cellular and electrophysiological study of the mechanisms underlying severe congenital dyskinesia and dystonia using a novel mouse model**” will be carried out under the supervision of Prof. N. Ben-Arie (HUJI), an expert on development of the nervous system; Prof. D. Gitler (Ben Gurion University) expert electrophysiologist/biophysics, Prof. Y. Yarom (HUJI) expert electrophysiologists, Prof. A. Lev Tov (HUJI) faculty of Med. expert on spinal cord neurophysiology and Dr. Arkadir (clinical neurology, Hadassah). The working hypothesis is that a mouse model of severe dystonia suffers from a disruption to the function of midbrain dopaminergic neurons and/or their targets. Thus, the research will focus on identifying the abnormalities in the molecular, cellular and electrophysiological integrity of the brain in the sick mice.

Job description: The Laboratory is seeking applicants holding a Ph.D. or equivalent degree or are expected to graduate within a few months and have extensive research experience in electrophysiology, particularly in whole cell patch recording in in-vitro preparation.

The positions are open and will be filled as soon as appropriate candidates are selected. Scholarships are secured for 2 years.

Applications should be emailed to: Prof. M. E. Spira at psychobi@mail.huji.ac.il