**Date:** July/1/2022

**TITLE:** Postdoctoral Fellow

Postdoctoral Fellow position is available in the laboratory of Attila Losonczy at Columbia University, New York to study in vivo cellular and microcircuit dynamics in the mouse hippocampus during hippocampal-dependent learning and navigational behaviors using cutting-edge functional imaging, electrophysiological, molecular, and computational approaches [1-7].

Examples of available research projects:

1) Characterizing synaptic and dendritic integration and plasticity in hippocampal CA1 and CA3 pyramidal cells and interneurons in the behaving mice during navigation and learning using two-photon calcium, voltage, and neurotransmitter imaging.

2) Dissecting microcircuit mechanisms of memory encoding and consolidation in the hippocampus using molecular/optogenetic manipulations and monosynaptic circuit mapping.

3) Dissecting altered hippocampal microcircuit dynamics using in vivo imaging and electrophysiological recordings in mouse models of epilepsy and schizophrenia.

Applicants should have a PhD or MD in neuroscience, physics or statistics and strong background in quantitative analysis of high-density neuronal recordings (electrophysiological and/or imaging) and related programming skills (e.g., Matlab, Python, or other OOPs).

Prior expertise with in vivo two-photon imaging, electrophysiological recordings (e.g., patch-clamp, patch-Seq) or optical physics are desired.

The successful applicant will be embedded in the larger Neuroscience community at Columbia University, the Mortimer B. Zuckerman Mind Brain and Behavior Institute in the new Jerome L. Greene Science Center and benefit from our network of collaborations with research groups in the US and in Europe.

Interested candidates should send their CV including publications, as well as the contact information of two references to Attila Losonczy (al2856@columbia.edu).

For more information please visit our website [www.losonczylab.org](http://www.losonczylab.org).

---