Positions are available for a postdoctoral fellow and/or assistant research scientist in the laboratory of Dr. Amy Lee, PhD in the Dept. of Molecular Physiology and Biophysics at the University of Iowa (https://medicine.uiowa.edu/physiology/). We are broadly interested in Ca²⁺ signaling mechanisms underlying the development, function, and repair of the nervous system. Our current areas of research include:

1) **Ca²⁺ and synaptic plasticity**: we are investigating the signaling pathways linking the activation of postsynaptic Caᵥ1 L-type Ca²⁺ channels in medium spiny neurons and the remodeling of striatal synapses and circuits in the context of neurodegenerative and neuropsychiatric disease. We are also studying the mechanisms distinguishing the efficacy of presynaptic Caᵥ2 channels in triggering neurotransmitter release and various forms of synaptic plasticity.

2) **Ca²⁺ and the regulation of axon growth and pathfinding**: we are investigating the pathways involved in the regeneration and growth of sensory neurons and their guidance by mechanical and chemorepulsive cues. A long-term goal of our auditory research program is to develop strategies to offset degeneration of spiral ganglion neurons that is associated with noise- and age-related hearing loss, as well as to improve the ability of cochlear implants to restore hearing perception.

3) **Ca²⁺ and synaptogenesis**: in the retina, we are investigating the role of presynaptic Ca²⁺ channels in nucleating the assembly of the photoreceptor ribbon synapse, and we are dissecting the various aspects of Ca²⁺ channel function that are necessary for this process.

Our research is currently funded by 3 NIH R01 grants, and multiple opportunities are available at the University of Iowa for appointment to institutional training grants. Our lab is located within the Pappajohn Biomedical Institute (https://medicine.uiowa.edu/pbi/), a community of interdisciplinary scientists and clinicians engaged in fundamental and translational biomedical research. We are also affiliated with the newly established Iowa Neuroscience Institute (https://medicine.uiowa.edu/iowaneuroscience/). The University of Iowa is one the nation’s premier public research universities (https://uiowa.edu/about) and is located in the heart of Iowa City, a college town with a rich history in the arts and sciences.

Responsibilities include leading a research project through publication, attending lab meetings and departmental seminars/workshops, oversight of electrophysiological and imaging equipment, mentoring graduate and/or undergraduate students, and assisting Dr. Lee in grant-writing and developing new research directions. Successful candidates will have a PhD in the Neurosciences or relevant field, experience in patch-clamp electrophysiology and optical imaging in various preparations, a strong record of productivity, excellent communication (written and verbal) skills, and an ability to work in, and foster, a multi-cultural environment.

Interested candidates should send CV, including contact information for 3 references, and statement of interest to Amy Lee (amy-lee@uiowa.edu).