

Postdoctoral Researcher – Mechanisms of Viral-Induced Neurodegeneration

Description

A position is open for a postdoctoral researcher with a strong background in neuroscience to join the research laboratory of Dr. Matthew Shtrahman in the Department of Neurosciences at the University of California San Diego (UCSD). Applicants should hold (or soon receive) a Ph.D. in neuroscience or a related discipline. The research project will study the role of viruses in the pathogenesis of dementia and the molecular mechanisms of neurodegeneration. The position is available November 1, 2021, and is located at UCSD in La Jolla, California and has at two years of funding available with possibility of extension.

Research Description

Major goals and objectives: to study how viral infection in the CNS leads to cell death and neuronal network dysfunction in neurodegenerative disease; determine the molecular and cellular pathways involved in viral-induced degeneration, including which components are cell autonomous versus immune cell mediated; identify therapeutic targets within these pathways for attenuating or reversing neurodegeneration.

Research Activity

- Work with wildtype and genetically engineered mice
- Stereo tactic animal surgery and viral injections into the CNS
- Immunohistochemistry and spatial transcriptomics studies of protein and RNA expression and localization in the CNS
- Molecular techniques for characterizing viral activation of cellular and immune pathways
- Advanced techniques for detection of viral genomic material
- *In vivo* two-photon calcium imaging of hippocampal neuron activity
- Prepare and write manuscripts for publication

Requirements

Applicants should hold (or soon receive) a Ph.D. in Neuroscience or a related discipline. Experience with animal studies (surgery, immunohistochemistry, *in vivo* imaging, breeding) or molecular techniques (qPCR, western analysis, recombinant techniques) are preferred, but not required. Successful applicants should be highly self-motivated, have outstanding experimental skills, and be able to think independently but also work well in a collaborative team environment. At least one first-authored publication from previous research work is required to be eligible.

Document Requirements

- Curriculum Vitae - Your most recently updated C.V.
- Cover Letter
- 2-to-4 references (contact information only)
- First author publication

About

Dr. Shtrahman is a board-certified neurologist with graduate training in physics and Assistant Professor in the Department of Neurosciences at UCSD. Dr. Shtrahman's lab is located at the Sanford Consortium for Regenerative Medicine on the UCSD campus. The Shtrahman lab develops and utilizes optical techniques to probe the function of hippocampal and neocortical circuits within the brain. Their research focuses on how developing neurons in the adult dentate gyrus encode memories in the brain and become altered in diseases of the nervous system. Recently work in the Shtrahman laboratory has shown that recombinant adeno-associated virus (AAV) attenuates adult neurogenesis in the murine dentate gyrus, which alters activity in this important brain region.

Through its location and its distinguished reputation, UCSD serves as the conduit for scientific dialogue throughout the region and has formed key partnerships with the [Salk Institute](#), the [Scripps Research Institute](#), [La Jolla Institute for Immunology](#), and the [Sanford/Burnham Institute](#), which are all located within walking distance or short bike ride from UCSD.

With approximately 140 faculty members, UCSD's Department of Neurosciences is among the nation's largest and is among the nation's leaders in NIH funding. The program's labs, medical centers and clinics are located in the heart of the San Diego life sciences district. The Department offers a rich training environment with its unique blend of clinical neurologists and basic scientists. They collaborate in the diagnosis, management, and research of neurodegenerative diseases, especially Alzheimer's and Parkinson's diseases, Huntington's disease, Down syndrome, stroke, epilepsy, neuromuscular disorders such as ALS, metabolic disorders, and neuro-developmental disorders, including autism.

Publications available at:

Dr. Matt Shtrahman <https://www.ncbi.nlm.nih.gov/sites/myncbi/1PA7JdHfDHO5b/bibliography/45584990/public/>

For further information, please contact Dr. Matthew Shtrahman mshtrahman@health.ucsd.edu.

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, or status as a protected veteran.