Postdoctoral Fellows

Molecular mechanisms of Parkinson’s disease

Post-doctoral fellowships are available immediately in the laboratory of Dr. Wolfdieter Springer to conduct NIH-, DoD- and MJFF-funded research on mitochondrial autophagy in Parkinson’s disease at Mayo Clinic in Jacksonville, Florida. Our laboratory is studying PINK1/Parkin/phospho-ubiquitin signaling pathways using clinical and pathological specimens and a combination of genomic, transcriptomic, proteomic, and metabolomic analyses. In addition, we implement molecular, structural, cellular and biochemical studies and develop novel genome-engineered cell models. We employ state-of-the-art microscopy such as automated high content and super-resolution imaging and perform structure/function-based drug design and high-throughput screening of chemical and genomic libraries.

Specific areas of interest include structural and functional analyses of the ubiquitin kinase PINK1 and the ubiquitin ligase PARKIN as well as the identification and dissection of key regulators of mitophagy. Based on a deep understanding of the underlying pathogenic mechanisms, we aim to discover specific disease signatures in clinical and pathological samples, develop novel biomarkers and small molecule therapeutics for age-related neurodegenerative diseases where mitochondrial and/or autophagic-lysosomal dysfunction emerge as a common leitmotif.


Candidates with a recent Ph.D. or M.D./Ph.D. and a strong research background in biochemistry, cell and structural biology are encouraged to apply. Experience in molecular biology, neuroscience, systems biology, integration of different omics datasets, and/or bioinformatics is desirable. Mayo Clinic offers a competitive stipend and a generous fringe benefit package. Interested candidates must have a record of peer-reviewed publications and should send their curriculum vitae, a statement of research experience and interests, and contact information for 2-3 references to:

Wolfdieter Springer, PhD
Associate Professor
Department of Neuroscience, Mayo Clinic
E-mail: Springer.Wolfdieter@mayo.edu

Mayo Clinic Jacksonville is one of the leading research establishments for neurodegenerative disorders in North America. At Mayo Clinic, you’ll discover a culture of teamwork, professionalism and mutual respect, and most importantly, a life-changing career.