Spotlight on Neuroscience | Neurodegenerative diseases

October 27, 2021

Dr. Alfonso Martín-Peña

University of Florida

Alfonso is a neurogeneticist interested in the synaptic mechanisms of cognition. To pursue this long-term goal, his work focuses on two main areas: (i) the molecular and cellular processes that regulate the synaptic physiology that support adaptive behaviors in healthy individuals; and (ii) the erosion of these processes in neurodegenerative disorders that lead to synapse loss, movement deficiencies and memory impairments. Specifically, his research focuses on the pathophysiological mechanisms of Alzheimer's Disease (AD) and related dementias, including Frontotemporal Lobar Degeneration (FTLD), Amyotrophic Lateral Sclerosis (ALS) and Parkinson's Disease (PD).

Dr. Caghan Kizil

German Center for Neurodegenerative Diseases

Caghan Kizil is an Associate Professor of Neuroscience in German Center for Neurodegenerative Diseases (DZNE) within the Helmholtz Association of German Research Centers in Germany and in the Taub Institute for Research on Alzheimer's Disease and the Aging Brain in Columbia University Irving Medical Center, New York. He is the founder CEO of Neuron-D GmbH in Germany. He obtained his B.Sc. from Middle East Technical University in Ankara, Turkey; M.Sc.

from University of Göttingen, and Ph.D. from Max Planck Institute Tübingen, Germany. His researches focus on stem cells and their therapeutic use in

Alzheimer's disease, animal models of disease, notably the zebrafish models of Alzheimer's, 3D culture model of human neural stem cell plasticity, industry-scale high-throughput screening approaches and single cell transcriptomics.

Dr. Mathias Droescher

Abbvie Deutschland GmbH & Co. KG

Mathias Droescher is a Principal Research Scientist at AbbVie Germany, focusing on Biomarker Discovery in Neuroscience. He is responsible for the ultra-sensitive immunoassay development in the Molecular and Imaging Biomarker group and in general works on the identification and implementation of translatable biomarkers into pre-clinical research. Focus areas are monitoring of biomarkers for target engagement and disease progression and how these are linked to functional or pathophysiological readouts. A major challenge in Neuroscience still constitutes the limitation of available sample volumes, the low abundance of potential biomarkers as well as minor differences between control and disease groups. Thus, the group strives to implement the high need of advanced technologies to improve the sensitivity and throughput of sample analysis in pre-clinical as well as early phase clinical projects.