

Title: Discovering a therapeutic target for Alzheimer's disease

Abstract:

Alzheimer's disease is the most common cause of cognitive impairment in older adults. Over 38 million people worldwide are affected and this number is expected to triple by 2050. Significant advances have been made in understanding the underlying mechanisms associated with Alzheimer's disease. Novel imaging techniques have shown that Alzheimer's neuropathology develops decades before overt clinical symptoms, creating a cascade of brain events that progressively lead to cognitive and functional decline. Mild cognitive impairment (MCI), a preclinical stage of dementia, has garnered significant attention as an early, transitional period between healthy aging and Alzheimer's disease. The investigation of MCI has been promising by showing early biological changes associated with Alzheimer's disease, including changes in brain structure and function. The hippocampus, a region known to be selectively vulnerable to Alzheimer's disease, presents a hyperactive, elevated signal during memory tasks as an indicator of impending cognitive decline and may be a potential target for treatment. A major paradigm shift to initiate treatment earlier in the disease process and explore non-pharmacological interventions has begun. Older adults with MCI may be an ideal target group for treatment, and there is accumulating evidence that modifiable lifestyle factors may be a promising approach to fighting Alzheimer's disease.

About the Speaker:

Dr. Judy Pa is a new assistant professor at the Institute for Neuroimaging and Informatics in the Keck School of Medicine and the department of Neurology. She was previously at the University of California, San Francisco, where she completed a postdoctoral fellowship in Alzheimer's disease and subsequently served 5 years on their Neurology faculty. Dr. Pa's research is focused on identifying individuals at risk for Alzheimer's disease, understanding how Alzheimer's pathology impacts brain function in the living brain, and developing ways to remediate cognitive and brain dysfunction. Judy's research is supported by two early career awards from the National Institutes of Health and the Alzheimer's Association. Judy is also dedicated to teaching and is looking forward to training students in USC's new Neuroimaging masters program and the Neuroscience PhD Program.