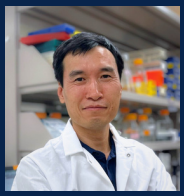
UC RIVERSIDE

BCH 252 Seminar Series



Zhefeng Guo, Professor, Department of Neurology, Mary S. Easton Center for Alzheimer's Disease Research, Brain Research Institute, UC Los Angeles

Seminar Title: "Molecular mechanism and structural biology of Alzheimer's disease"

Abstract: Development of therapeutic interventions for Alzheimer's disease has been guided by the amyloid hypothesis, which puts Aβ aggregation as the initiating event of a pathogenic cascade leading to dementia. The main products of Aβ aggregation include soluble oligomers and insoluble amyloid fibrils. The Aβ fibrils are the main component of senile plaques, but the oligomers are more toxic and believed to be more pathogenic than fibrils. In the current form, the amyloid hypothesis does not fully capture the complex nature of Aβ aggregation. Here I will first integrate the concept of Aβ supersaturation into the amyloid hypothesis, laying out a framework for the mechanistic understanding of Alzheimer's disease. I will further discuss some recent progress we made on the structural studies of Aβ oligomers and fibrils using site-directed spin labeling and EPR spectroscopy, and how these studies improve our understanding of Aβ aggregation.

Tuesday, October 22nd, 2024 12:00 p.m. - 12:50 p.m. PST

In-Person: Genomics Auditorium 1102A

Host: Dr. Chia-en Chang