

Special Issue

Translating Genetic Discoveries in Neurodegenerative Diseases Research

Message from the Guest Editors

Dear colleagues,

A major challenge in the post-genome wide association study (GWAS) era of age-related neurodegenerative diseases (NDDs), including late-onset Alzheimer's disease (LOAD) and Parkinson's disease (PD), is progressing from the identified genetic associations to disease mechanism. Most disease-associated SNPs are in noncoding regions, which are likely impacting disease-relevant brain regulatory elements that control expression of disease risk genes. Current studies aim to untangle the genetic complexity and genomic architecture of NDDs and to translate genetic association discoveries to causal mechanisms of disease. These studies integrate characterization of human brain tissues, in silico, in vitro, and in vivo approaches. Advancing the understanding of NDDs' genetic complexity and deciphering the regulatory elements and the corresponding genes mediating NDD risk will be translational by refining polygenic risk scores (PRS) based on functional data and identifying novel therapeutic targets for these devastating diseases which manipulate dysregulated genes.

Guest Editors

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