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Translating Genetic Discoveries in Neurodegenerative Diseases Research

Guest Editors:

Prof. Dr. Ornit Chiba-Falek

Division of Translational Brain Sciences, Department of Neurology & Pathology, and the Center for Genomic and Computational Biology, Duke University Medical Center, Durham, NC 27710, USA

Dr. Boris Kantor

Director of Viral Vector Core, Department of Neurobiology, Duke University School of Medicine, Durham, NC 27710, USA

Deadline for manuscript submissions:

closed (30 April 2021)

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.



mdpi.com/si/47127

Special Issue



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Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of
Odontostomatologic and
Specialized Clinical Sciences,
Sez-Biochimica, Faculty of
Medicine, Università Politecnica
delle Marche, Via Ranieri 65,
60100 Ancona, Italy

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