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Genetic Polymorphisms Associated with High Risk to Develop Dementia in Subject with TBI History

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Abstract

Exposure to traumatic brain injury (TBI) increases the risk for developing Alzheimer's disease (AD), although there is little information on the biological interrelationship between TBI and AD and how to identify the risk factors of individuals with TBI for developing AD.Based on this consideration our studies were designed to clarify the contribution of TBI to the development of AD and clarify the genetic polymorphisms underlying/responsible for their interaction. Our overall strategy is to identify genetic polymorphisms from our mild TBI (mTBI) Veteran study cohort that could be associated with increased risk of preclinical AD (based on cerebrospinal fluid [CSF] biomarker measures) and/or for prodromal AD (based on cognitive function measures). The outcome of this study will provide evidence supporting the theory that TBI independently contributes to neuropathology analogous to preclinical AD and functional deficits analogous to prodromal AD. Collectively, our ongoing studies will provide an innovative approach for a better understanding and improved diagnosis of increased risk for AD dementia in subjects with history of TBI.

Biography

Dr. Giulio Maria Pasinetti's research on lifestyle factors and metabolic co-morbidities influencing clinical dementia, neurodegeneration and Alzheimer's disease has made him a pioneer in his field. He is the recipient of major awards such as The Alzheimer's Association's Zenith Award and the Foundation Queen Sofia of Spain Research Center Award on Alzheimer's Disease. He has received more than 30 grants and has published over 160 groundbreaking research articles. Dr. Pasinetti is a Professor of Neurology, Psychiatry, Neuroscience, and Geriatrics and Adult Development, and is Chair of the Brain Institute Center of Excellence for Novel Approaches to Neurotherapeutics at Mount Sinai School of Medicine. He also serves as Director of the Basic and Biomedical Research and Training, Geriatric Research, Education and Clinical Center at the Bronx Veterans Affairs Medical Center.