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## Alzheimer's disease hypotheses: A multidimensional view

Alzheimer's disease (AD) is a progressive neurodegenerative disorder, the most common cause of dementia and considered as multifactorial disease. A number of hypotheses have been proposed to describe the molecular pathogenesis of AD including amyloid  $\beta$  ( $A\beta$ ), Tau, cholinergic neuron damage, oxidative stress, inflammation, and metal hypothesis were received high attention. Thus, based on these hypotheses many efforts have been done to driven the drug development strategies for Alzheimer's disease for over 20 years. Due to the complexity of human

brain and poor understanding of molecular mechanism of AD pathogenesis, not a single hypothesis satisfies the molecular pathogenesis of AD. Based on the line of evidences, we may propose the "quadrant AD hypothesis" which is a combination of amyloid  $\beta$  ( $A\beta$ ), Tau, oxidative stress, and metal hypothesis. Therefore, there is need of clinical evidence based multidimensional hypothesis which may result into the researches and therapies against the multifactorial AD.

## Biography

Syed Haris Omar working as a Lecturer in Bioscience at Endeavour College of Natural Health, Melbourne, Australia, and having >8 Years of Lectureship experiences. He received Bachelor and Master of Pharmacy degree and awarded his PhD in Pharmacology from the School of Biomedical Sciences, Charles Sturt University, Australia in 2016. His research work was focused on Alzheimer's disease prevention and treatment by using naturally derived Olive biophenols. He used transgenic mice models of Alzheimer's disease to contribute in the better understanding of the plant Biophenols role as an alternative approach against the amyloid-beta toxicity in Alzheimer's disease. His research interest lies in the area of pharmacology, neuropharmacology, and natural products against the neurodegenerative diseases. He has published several peer-reviewed articles including research, reviews, book chapters and conference papers, and serving as Editorial Board Member and reviewer in Journals of repute. Currently, he is serving as a member in The Australian Society of Clinical and Experimental Pharmacologists and Toxicologist (ASCEPT), Australian Society for Biochemistry and Molecular Biology (ASBMB), American Chemical Society (ACS), American Association for The Advancement of Science (AAAS), and American Oil Chemist Society (AOCS). In addition, he is Vice Chair in the Local Health Advisory Committee, NSW Health, board member in The Australia Day Community Committee, and The Riverina Family Law Pathway Network Steering Committee.

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