Potential strategy of diet on gene expressions in alzheimer's disease (ad)

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ABSTRACT

Alzheimer's disease (AD) an age-related neurodegenerative disease has gained much attention due to their irreversibility, multifactorial approach with increase in prevalence and accompanied socio economic burden. Many studies have focused on a new modality of treatment where nutritional factors can influence the expressions of genes, central to the pathogenesis of AD. This review showcases the pathogenesis of AD and the beneficial effects of diets rich in flavonoids and resveratrol in influencing normal cognitive function. Flavonoids are known to mediate specific interactions within the ERK and PI3-kinase/Akt signaling pathways and are shown to increase the expression of neuroprotective and neuromodulatory proteins and increase the number of, and strength of, connections between neurons and decreases the neuronal stress through the generation of a heat shock protein 70 (HSP70). Resveratrol performs its action through SirT1 gene. Thus the therapeutic potential of the diets provide a better understanding of the ageing mystery.