

Pharmacology and Ethnopharmacology

May 02-04, 2016 Chicago, USA

Nutritional interventions assist in drug therapy and the treatment of insulin resistance and Alzheimer's disease

Ian James Martins

Edith Cowan University, Australia

In Western countries age-related diets such as obesity and diabetes have become important risk factors for Alzheimer's disease (AD). Antiobesity drug discovery programmes have been ineffective with drug withdrawals due to adverse effects that were never predicted from clinical trials and drug development. These drugs have not reduced neurodegeneration associated with obesity. Removal of drugs such as fenfluramine, phentermine, sibutamramine and orlistat were not related to improvements in medical complications related to obesity. Cholesterol lowering drugs such as statins have not delayed the programmed cell death pathways in the brain with cholesterol and amyloid beta dyshomeostasis linked to neurodegeneration. Nutritional therapy instead of drug therapy has appeared as a novel approach by activation of nutrient sensing genes associated with appetite regulation with the delay in the diseases of the liver and brain that are connected to AD. High fibre diets that contain phytosterols and short chain fatty acids regulate hepatic membrane cholesterol and amyloid beta homeostasis with beneficial effects on glucose homeostasis and on cholesterol homeostasis. High fibre diets and their contents of bacterial lipopolysaccharides, mycotoxin and xenobiotics have become important with improvement in drug effectiveness related to the amount of fibre diet consumed associated with the intact peripheral amyloid beta clearance pathway and reversal of NAFLD. High fibre diets may improve antiobese drug therapy in insulin resistance and AD and their reduced contents of LPS, mycotoxin and xenobiotics may improve interactions between drug molecules and membrane and nuclear receptors that elicit therapeutic effects in NAFLD and Alzheimer's disease.

Biography

Ian James Martins has been a reviewer for various international journals and research grant agencies and is the Chief Editor for Scientific and Academic Publishing over the past 20 years. Research Gate's analysis of his publication stats place the RG score higher than 93% of the international researchers. He received the Richard Kuhn Research Award-2015 in Endocrinology and Metabolism.

i.martins@ecu.edu.au

Notes: