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Accelerated brain aging with relevance to type 3 diabetes and alzheimer's disease

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The main constituent of plaques in the brain of Alzheimer's Disease (AD) individuals namely Amyloid beta (Aβ) is a proteolytic product of a larger protein the Amyloid Precursor Protein (APP) protein. Carriers of the apo E4 allele are at greater risk of developing AD with increased deposition of amyloid-beta plaques in western countries. Protein and Aβ homeostasis is now crucial to the lifespan of organisms and is an important feature that determines the aging process in obesity, diabetes and neurodegenerative diseases. The scientific understanding of the maintenance of peripheral blood plasma Aβ and caffeine metabolism has now become essential to prevent neurodegeneration that is linked to type-3 diabetes. The concentration of Aβ within the brain is determined by hepatic Aβ clearance and interest in the liver has increased markedly since in western countries the incidence of Non-Alcoholic Fatty Liver Disease (NAFLD) and insulin resistance has reached approx. 20% of the developed world. Induction of type-3 diabetes is related to delayed hepatic caffeine metabolism (NAFLD) with circadian dysynchrony (type-3 diabetes) connected to defective peripheral hepatic caffeine and Aβ metabolism. Healthy diets stabilize type-3 diabetes and maintain the circadian rhythm with relevance to brain insulin resistance and alzheimer's disease.

Biography

Ian James Martins is an Editor and Reveiwer for Open Acess Pub/MDPI journals. He has appointed as the Chief Editor for *International Journal of Diabetes Research* (2014-2018); *Research and Reviews: Neuroscience* (2016-2018) and *Journal of Diabetes and Clinical* Studies (2017-2018); Scientist for Science Advisory Board (USA) and Academic with Academia.edu. He also has Lifetime Membership by International Agency for Standards and Ratings as Fellow; Winner of World Academic Championship-2017 in Diabetes and Medical Science (Nutrition).

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