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Transcriptional dysregulation of sirtuin 1 is relevant to Diabetes and global chronic disease

Ian James Martins

Edith Cowan University, Australia

New discoveries in medicine are required to determine the importance of food restriction with relevance to appetite regulation and defective post-prandial lipid metabolism. The repression of the calorie sensitive gene Sirtuin 1 (*SIRT1*) is now critical to hepatic glucose/lipid metabolism with relevance to insulin resistance and the severity of global chronic diseases such as non-alcoholic fatty liver disease (NAFLD). Defective *SIRT1* is now related to mitochondrial apoptosis in NAFLD and cardiovascular disease associated with the global diabetes epidemic. Nutritional regulation of *SIRT1* is connected to mitochondrial apoptosis and programmed cell death. Magnesium therapy with nutrition is essential to activate *SIRT1* and prevent NAFLD and cardiovascular disease. The assessment of diabetes in the developing and developed world indicate that various factors may predispose individuals to *SIRT1* transcriptional dysregulation with induction of insulin resistance, core body temperature disorders connected to organ disease. In the developed world calorie excess, caffeine diets, core body temperature/appetite dysregulation and magnesium deficiency may involve *SIRT1* repression with relevance to cell senescence and accelerated aging. Nutritional interventions are required to prevent mitophagy that is linked to NAFLD and diabetes. Caffeine doses should be reassessed with relevance to the global NAFLD epidemic with NAFLD expected to rise to 40% of the global population by 2050. In the developing world bacterial lipopolysaccharides are now connected to NAFLD and diabetes with food quality relevant to mitochondrial apoptosis in various chronic diseases.

Biography

Ian James Martins is an Editor/Reviewer for Open Access Pub/MDPI journals and other journals. He is the Advisory Board Member for Photon Journal. He is also the Fellow of International Agency for Standards and Ratings (IASR). He has been awarded with the Richard Kuhn Research Award-2015 Endocrinology and Metabolism. He is the Chief Editor for *International Journal of Diabetes Research*.

i.martins@ecu.edu.au

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