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Association between leptin (G2548A) and leptin receptor (Q223R) polymorphisms with plasma leptin, BMI, stress, sleep and eating patterns among the multi-Ethnic young Malaysian adult population from A Healthcare University**Jaiprakash Mohanraj***International Medical University, Malaysia*

Relative leptin resistance in childhood to absolute leptin resistance in maturity suggests sleep, eating behaviour, and psychological state as probable causes. Currently the body of evidences available provides inconclusive evidence linking G2548A and Q223R to obesity. Further, we could find very little data that have observed the association between environment and gene polymorphism, especially in a multi-ethnic population that exists in Malaysia. This study looks for a possible link between sleeping habits, eating behaviour, and stress indicators with plasma leptin and its genetic variation in young adult Malaysian healthcare students. The study involved 185 first and second second-year medical and dental students from a healthcare university. PCR-RFLP determined the genotype, ELISA tested serum Leptin, and a self-administered questionnaire evaluated sleep, eating behaviour, and psychological condition. Gender and ethnicity are linked to fasting plasma Leptin levels (p0.001). Plasma Leptin also affected affects stress, anxiety, and sadness. LEP and LEPR polymorphisms were not associated with BMI, plasma Leptin, sleep, eating behaviour, or psychological state. Young adult Malaysian Indians were obese and overweight, while Chinese were underweight. These findings imply overweight and obese participants were in stage I of Leptin resistance, and lifestyle change or Leptin therapy can could prevent them from becoming crippling obese as they age.

Biography

Dr Jaiprakash Mohanraj is a researcher in the field of obesity, leptin, genomics, and proteomics. With over a decade of experience in this field, he has made significant contributions to the understanding of the genetic and molecular mechanisms underlying obesity and its related metabolic disorders. His research has focused on identifying the impact of environment on genetic and proteomic changes that occur in obesity, and how these changes affect the regulation of energy balance and metabolism. He has also been investigating the role of leptin, Ghrelin, Insulin, hormones that play key roles in the regulation of appetite and energy expenditure, in the development of obesity. Through his work, he has identified novel genetic variants and proteins that may contribute to the development of obesity, and has developed new strategies for the prevention of this disease.