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To investigate the influence of polymorphisms in *PRDM16* and *PDE4D* genes who's involved in thermogenesis process on obesity and blood lipids profile in Saudi population

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Aim: The aim of this study was to investigate the influence of polymorphisms in *PRDM16* and *PDE4D* genes who's involved in thermogenesis process on obesity and blood lipids profile in Saudi population.

Methods: A case control format was used that involved 89 obese individual and 84 non-obese (control). The *PRDM16* (rs2651899) and *PDE4D* (rs295978) polymorphisms were genotyped using KASP™ (Competitive Allele-Specific PCR) method.

Results: Participants with the mutated genotypes, AA and AG, of *PRDM16* (rs2651899) polymorphism were significantly more likely to be obese as compared to participants with wild type genotype (OR=21, 95% CI=5.4190 to 84.4231, P value<0.0001 and OR=44.6, 95% CI=11.5984 to 172.0157, P value<0.0001, respectively). This polymorphism found to be significantly affecting the participants blood lipids profiles. In contrast, *PDE4D* (rs295978) polymorphism was not associated with risk of obesity and had no effects on blood lipids profile.

Conclusions: We found that the *PRDM16* polymorphism (rs2651899) is a risk factor for obesity and influence blood lipids profiles significantly in Saudi population. While the *PDE4D* (rs295978) polymorphism didn't show significant effect on risk of obesity or blood lipids profiles.

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Quantitative measurements of lead and cadmium in select street foods sold in Taft Avenue, Manila

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Heavy metals are toxic substances which can be transmitted through air and can pollute bodies of water. They may contaminate a variety of products, including street foods. In this study, calamares (fried squid rings) and isaw (grilled chicken intestines) samples were obtained from two separate stalls in different locations along Taft Avenue, Manila. One kilogram of each sample was analyzed for lead (Pb) and cadmium (Cd) content using Inductive coupled plasma-atomic absorption (ICP-OES) spectrophotometry. The results showed that, the level of cadmium (Cd) present in the calamares samples exceeded the provisional tolerable weekly intake of 0.025 ppm set by the World Health Organization (WHO), in 2010. On the other hand, the level of lead (Pb) from the same samples was below the provisional tolerable weekly intake of 3 mg of lead/person, equivalent to 0.05 mg/kg b.w. for adults, set by IPCS INCHEM organization, the Joint FAO/WHO Expert Committee on Food Additives. The lead content for calamares from both Estrada street and Pedro Gil was lower than the provisional tolerable weekly intake. For future researcher, it is recommended that other heavy metals should also be studied. Nowadays, pollution along area where vehicles are numerous is getting worse despite measure done by the government such as anti-smoke belching law. It is also recommended that leaded gasoline be totally banned, thus minimizing lead contamination of food sold along streets. Other streets or places where there are many street vendors that sell different kinds of food should also be studied. The results of these studies done and still to be done should serve as a basis for information campaign on heavy metals contamination of food.

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