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Network and Polymorphic Analysis of Obesity Candidate Gene-Plin1: A Bioinformatics Approach

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ABSTRACT Gene network analys is provides an intricate interrelation between linked network elements. The aim of the present research study is tofocus on compact network associated with key obesity candidate gene, perilipin-1 and its polymorphic study. The methodology constitutes the *in silico* gene network, enrichment analysis and polymorphic study of plin1 gene. The computational gene network analysis suggested that plin1 is strongly associated with abhd5 and prkaca.The enrichment analysis elucidated their requisite involvement in obesity *via*imbalances in lipid metabolic processes. On demonstrating the damaging effect of diseased nsSNP of plin1 shows that the amino acid change for rsID-rs8179071 is from serine to leucine at position 348 is found to be the diseased state and hence associated with obesity. The plin1 gene shows functional interaction with two genes (abhd5 and prkaca) which are associated with obesity. In addition, polymorphic prediction indicated that rsID-rs8179071 is linked with obesity.