

Metagenomic study of single-nucleotide polymorphism within candidate genes associated with type 2 diabetes in an Indian population

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ABSTRACT. A population-based study was undertaken to evaluate linkage between single-nucleotide polymorphisms known as risk factors and type 2 diabetes in an Indian population. The study population was comprised of 40 normal glucose-tolerant individuals (21 males and 19 females) and 40 type 2 diabetes patients (21 males and 19 females). The genes and their corresponding single-nucleotide polymorphisms that we screened were VDR (rs 731236 and rs 1544410), IL-6 (rs 1800795), TCF7L2 (rs 7903146) and TNF- α (rs 1800629). The risk alleles were more frequent in the subjects with type 2 diabetes, except for the TNF- α gene, which was very infrequent in the population; the normal allele occurred at high and similar frequencies in both normal and diabetic individuals.

Key words: Insulin resistance; SNP; VDR; IL-6; TNF; TCF7L2