



## ▼ UNDERGRADUATE ABSTRACTS

### UG -13 : GENOTYPE AND ALLELE FREQUENCY OF POR\*28 GENE POLYMORPHISM IN SOUTH INDIAN POPULATION

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**Background:** Cytochrome P450 oxidoreductase (POR) supports reactions of microsomal cytochrome P450 which metabolize various drugs and steroid hormones. The principal function of POR is to transfer electrons from reduced NADPH through FMN which then associates with Cytochrome P450 thereby permitting catalysis of the reactions. Polymorphism of POR\*28 gene was found to be associated with endocrinological abnormalities, alteration to various drugs, cholesterol metabolism and many other CYP450 metabolizing enzyme activities. The frequency of POR\*28 has been studied in various populations like Swedish, Korean and Chinese with varying results.

**Methodology:** This study is a genetic epidemiological study conducted on healthy volunteers. Genomic DNA

was isolated from the blood sample using QIAGEN Blood DNA isolation kit. Genotyping of the DNA samples for POR\*28 polymorphism was done using TaqMan assay kits in Real Time PCR platform.

**Results:** The results in our study showed a Genotype frequency of Wild type - CC of 41.7% Heterozygous - CT of 47.2% and Mutant - TT of 11.1%. The Allele frequency was C - 65.3% and T - 34.7%.

**Conclusion:** From this study we have identified the genotype and allele frequency of POR\*28 gene and the minor allele frequency of POR\*28 gene in south Indian population was found to be 34.7%.