7. SUMMARY AND CONCLUSION

- IL 1β polymorphism was not associated with both female (OR = 1.24, p = 0.19) and male infertility (OR = 1.01, p = 0.53). ESR β polymorphism was not associated with either female (OR = 1.15, p = 0.30) or male infertility (OR = 1.00, p = 0.53).

- IL 1β polymorphism did not influence spermatogenesis (OR = 1.18, p = 0.30) but positively associated with PCOS (OR = 2.80; p = 0.004) and Tubal blocks (OR = 2.18; p = 0.026). The mutant allele of ESR β was not associated with semen parameters (OR = 1.01, p = 0.52), PCOS (OR = 0.81, p = 0.32) and tubal blocks (OR = 0.74, p = 0.22) (Appendix VII).

- The polymorphism frequency was not much varied in caste analysis for IL 1β (Appendix VII) as well as ESR β (Appendix VIII)

- IL 1β mutant allele was positively associated with obesity (OR = 3.03, p = 0.006) where as ESR β polymorphism was positively associated with obesity particularly in PCOS (OR = 6.00, p = 0.01).

- The age group classification of study population and analysis with both the polymorphism were not associated (Appendix VII & VIII)

- HLA DRB1*12 allele was negatively associated with PCOS infertility (OR = 0.31; p = 0.006) and TFI (OR = 0.37; p = 0.013).

- The positive association of HLA DRB1*15 (OR = 3.29; p = 0.002) and HLA DRB1*03 (OR = 2.52; p = 0.047) alleles were observed in PCOS infertility.

- HLA DRB1*04 was positively associated with SI TFI (OR = 3.05; p = 0.028) and Vanniyar TFI (OR = 16.0; p = 0.007).

- HLA DRB1*07 was positively associated with tubal blocks (OR = 2.49; p = 0.015) particularly in PI (OR = 2.93; p = 0.009).
• The negative impact on semen parameters was observed with increase in age (OR = 1.98; p = 0.02).

• High prevalence of PCOS in patients less than 25 years was noticed (OR = 2.80; p = 0.003).

• The clinically normal women showed significantly low BMI values (Underweight) (OR = 7.08; p = 0.004). The obesity was dominated in women with SI (OR = 3.41; p = 0.002).

• Blood groups were not associated with PCOS, tubal blocks or infertility (Table 18).

• HLA DRB1*15 allele with ‘B’ blood type is negatively associated with female infertility (Appendix XII).