2.0 OBJECTIVE OF THE STUDY

BD is one of the most heritable multifactorial medical conditions with highest incidence in United States and lowest in India. The basis of BD is still being investigated as various genes are continuously being identified to be associated with BD. In addition to genetic, physiological, psychological and environmental factors play a major role in triggering BD. BD patients show a high degree of mood changes and disrupted circadian rhythms which is responsible for regulating behaviour and a variety of physiological functions. ARNTL is a core circadian clock component which dimerizes with CLOCK protein to regulate the circadian rhythms. Several studies have identified the clock genes especially ARNTL as potential bipolar candidate gene. In addition, several polymorphisms in ARNTL have been reported to be associated with BD in different ethnic groups. However, in Indian population, although several individuals are diagnosed with BD, till date there are no reports available which relates them to ARNTL gene polymorphisms. With the above known facts, the main objective of our study was to screen a South Indian family with incidence of BD I for ARNTL gene polymorphisms. The subjects were experiencing sleep disturbances along with mania in Summer and depression in Winter. As BD and sleep disturbances are associated with disrupted circadian rhythms, we attempted to detect if the five most studied SNPs namely rs2279287, rs1982350, rs7126303, rs969485 and rs2290035 across the core circadian clock gene ARNTL are present in the 30 members of a close knit family with BD I.