Congenital cataract is a autosomal dominant inheritance - The condition significantly cause visual impairment in childhood. Though it can be diagnosed at birth, but an early post natal detection & prompt treatment are a necessity for obtaining good visual outcomes. Eitiolgy: opacity of the lens from a variation of the refractive index of the lens. Due to the mutation in the associated genes, *cryaa, nhs, pax6.* *.* Studies shows an estimated prevalence of fewer that  2,00,000 children worldwide are blind due to cataract, and that 20,000–40,000 children are born each year with congenital cataract. As per World Health Organization, this number is close to 8 per 10,000 children in India. The variation in dermatoglyphics pattern and its associated with congenital cataract condition has not been documented in South India population. Therefore the objective of the study is to analyse the specific variation in genes associated with congenital cataract in South Indian population.

Inclusion criteria: 10 to 16 years old, children affected with Congenital cataract. Similar aged individuals with normal eyesight considered as control group.

Exclusion criteria: Participants who have congenital blindness other than the Congenital cataract condition are excluded.

Methodology: -

Molecular analysis of mutations through targeted sequencing of *cryaa, nhs, pax6* genes and cytogenetic variation. 3ml of blood samples will be collected from 10 congenital cataract subjects with severe deviations in the dermatoglypic pattern. Similarly 3ml of blood samples will be collected from 10 normal individuals as control group. For molecular analysis 1.5ml of blood sample is used for isolating the DNA followed by PCR and Sanger sequencing. Rest 1.5ml of blood sample is used for leukocyte culture and karyotyping.

Expected outcome: - The population specific variation in Karnataka population can be identified and its correlation with the dermatoglyphic pattern can be analysed.

The following work often require the collection of blood samples from human subjects. In order to protect the rights and welfare of the individuals donating samples, it is necessary to obtain ethical clearance from relevant authorities. As per the guidelines all blood samples will be collected by trained medical professionals following standard procedures for sample collection and handled by authorized and trained researchers in a designated laboratory. The information collected will be kept confidential and subject to data protection procedures. I am writing to request ethical clearance for the collection of blood samples from patients. And I will also obtain informed consent from all participants in accordance with the applicable regulations. Proper disposal of blood samples will be taken care according to the guidelines set by the regulatory bodies for disposal of biohazardous waste, including any needles used during sample collection.