The work done as a part of this thesis was productive in terms of research outcome and clinical application, but like all other works, it has some limitations, especially owing to the fact of being cell biology related work where objective quantification and characterization of the product can be a problem and therefore has many biological plausibilities. Added to this is a lack on consensus in the markers that characterize adult stem cells. These include,

- The method of isolation used for isolating bMMNCs is not qualitative. In spite of using a simple method of isolating and culturing BMSCs from BMMNCs, the chance of variability in BMMNC yield, percentage of BMSCs, contamination of committed progenitors from sample to sample during marrow processing always exists. This can be overcome by using sorting cells by FACS and MACS to get an enriched population of stem cells.

- Functional evaluation of neural and photoreceptor differentiated BMSCs by electrophysiological studies and biochemical assays in vitro and photoreceptor functionality in vivo post transplantation of cells by ERG would certainly have added weightage and strengthened our findings.

- While studying the gene expression studies, limbal epithelial cells used in this study are heterogeneous population containing minimal contamination of stromal cells. This can be overcome by using sorting cells by FACS and MACS to get an enriched population of stem cells.