Glaucoma is a group of eye disorders that progressively damages the optic nerve has no symptoms and no cure (yet), is a leading cause of irreversible blindness and everyone from infants to senior citizens are at risk. An estimated 60.5 million cases were found globally in 2010 and it is anticipated that number may increase to almost 80 million by 2020 and to 111.8 million by 2040. In the United States, 2.2 million Americans have been diagnosed with glaucoma, of which more than 120,000 have been rendered blind. Glaucoma costs US about $2.86 billion annually. It is a matter of deep concern that, many renowned physicians and glaucoma scientists including Dr. David Epstein, one of the most prestigious leaders of glaucoma research is no longer with us. Based on statistical analysis it is clear that the rate of the glaucoma affected portion of the population is increasing exponentially but glaucoma research laboratories are neither increasing in number nor gaining in global popularity. The main theme of this special session is to discuss the following fundamental issues: Why has glaucoma research not yet gained popularity among scientists worldwide? What factors of glaucoma research prevent the acceleration of interdisciplinary research activities with other branches of eye research? What is the status of known factors that contribute to the pathogenesis of glaucoma?

Biography

Janardan Kumar is Professor and Former Chair of Natural Sciences. He has earned MS in biochemistry from University of Allahabad and received PhD in Chemistry at CDRI, Lucknow affiliated to Kanpur University in India. Being research Assistant Professor in the department of Cell Biology at Duke University in 1998, he developed his research interest in the field of glaucoma and joined the internationally renowned laboratory of Prof David L Epstein at Duke Eye Center, Duke University, Durham, NC (USA). His work at Duke Eye Center provided opportunity to file two patents, one for glaucoma therapy and the other for vitrectomy. At TEI biosciences in 2002, he gained a unique experience on stem cell research. His strategies made him capable of inducing differentiation of insulin producing cells from adult human skin fibroblast stem cells using specific signaling complexes, and successful transplantation of these cells into three diabetic nude mice resulted of maintaining the normal glucose level for approximately a month.

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