



BME SEMINAR SERIES

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“Racioethnic disparity in the biomechanics and mechanobiology of primary open angle glaucoma”

Across multiple prospective clinical studies of patients with glaucoma and ocular hypertension, age and ethnicity appear as significant risk factors for the development and progression of glaucomatous optic neuropathy. While the reasons for these disparities are likely multifactorial, there is now sufficient evidence to suggest that differences in the biomechanical properties of the load bearing connective tissues of the optic nerve and posterior sclera between these racial and ethnic groups contribute to this increased risk. In this presentation we will summarize differences in the IOP-dependent optic nerve head microstructure and biomechanical response of human donor tissues acquired from those at higher risk for primary open angle glaucoma. These results will motivate a discussion of future experiments aimed achieving a better understanding of the role of ONH mechanobiology in the initiation and progression of primary open angle glaucoma.