# Chem 412: BMB Seminar
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## *Glaucoma: "Sneak Thief of Sight"*

Glaucoma is the third leading cause of preventable blindness. Roughly 5.2million people have the disease and 2 million of these people don't know they have it. Glaucoma is characterized by high intraocular pressure eventually causing irreversible optic nerve damage. The high intraocular pressure arises from unequal flow of aqueous humor into the anterior chamber and out through the trabecular meshwork. The trabecular meshwork is located at the angle where the cornea and iris meet. A high intraocular pressure will develop if the angle is too narrow or if it's completely blocked. The molecular mechanisms of the blockage is unknown, but current research is targeting cells and proteins associated in the trabecular meshwork. One gene has been cloned and closely linked to glaucoma, GLCA1, also known as MYOC and TIGR. The protein associated with the gene is called TIGR, Trabecular Meshwork Inducible Glucocorticoid Response. The function of the protein is unknown, but some structural properties have been discovered and speculations of what its function could be. Glaucoma can be treated with eye drops if caught early enough. Researchers theorize glaucoma is caused by an interaction of many proteins. Future goals are aimed at discovering these proteins and the genes associated with these proteins. Once various proteins are discovered the mechanism will no longer be a mystery.


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