

TITLE: Gene Therapy for inherited or acquired retinal degeneration

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RESEARCH PROJECT DESCRIPTION (brief overview of background, hypothesis, methods, role of medical student, funding and relevant publications -- SHOULD NOT EXCEED ~ 250 WORDS)

We are developing gene therapy for two diseases that are major causes of blindness. The first is retinitis pigmentosa that leads to loss of peripheral vision and then central vision in 1/4000 people. Medical student will assist a graduate student or postdoctoral fellow in molecular cloning and tissue culture experiment to develop gene therapy vectors to treat this disease in mouse models. The second disease is age related macular degeneration which leads to loss of central vision in as many as 10% of people over the age of 60. Students will be asked to help laboratory staff develop gene-based anti-oxidant and anti-inflammatory therapy. Willing to work with mice is a must.