

News

Office of Medical Information
The University of Texas

Southwestern Medical Center at Dallas

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****UT Southwestern receives blindness
prevention research grant

DALLAS -- Research to Prevent Blindness has awarded a \$50,000 grant to The University of Texas Southwestern Medical Center at Dallas. The organization is the world's leading voluntary supporter of eye research. Previous RPB grants to UT Southwestern total more than \$271,000.

Dr. James McCulley, David Bruton Jr. professor and chairman of ophthalmology, said the grants are particularly important because federal funding isn't adequate to meet research needs. "This grant is for unspecified use, which provides us with the flexibility to explore promising new research areas," Dr. McCulley explained.

Much of the ophthalmology research at UT Southwestern focuses on diseases and problems of the cornea. UT Southwestern researchers are investigating the role of the immune system in corneal transplantation, McCulley said. They have demonstrated that the presence of star-shaped Langerhans cells in the central areas of the cornea triggers graft rejection. These cells, typically found in the deeper layers of the skin and occasionally in the corneal epithelium, are believed to be involved in certain immune responses. Research at UT Southwestern has shown that destroying these cells using ultraviolet radiation lessens the likelihood of rejection. This finding is significant not only in the field of corneal transplantation but for other organ transplantation.

(More)

In addition, faculty members are studying the changes in the cornea caused by wearing contact lenses. They hope to find ways to reverse these changes. In related studies, researchers are seeking a way make permanent corrections in the shape of the cornea using refractive surgery. In most cases refractive surgery procedures such as radial keratotomy and excimer laser photorefractive keratotomy produce only a temporary change in the shape of the cornea's surface. As the incisions heal, the cornea often reverts to its original shape; then vision returns to its original state.

Dr. McCulley is currently heading a national multi-center trial for Bausch & Lomb to test the efficacy of a therapy for acanthamoeba keratitis, a once rare but increasingly common amoebic infection that can cause blindness as the disease destroys the cornea. The infection usually results from contact lens wearers' rinsing their contacts with tap water or using homemade saline solutions.

Researchers at UT Southwestern also are investigating methods to prevent eye tumors from spreading to the liver, which often has fatal consequences. If ophthalmology researchers can prevent metastasis, their work could have applications for other forms of cancer in other organs.

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NOTE: The University of Texas Southwestern Medical Center at Dallas comprises Southwestern Medical School, Southwestern Graduate School of Biomedical Sciences and Southwestern Allied Health Sciences School.