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New glaucoma treatment studied

AMES, Iowa, Aug. 7 (UPI) -- U.S. scientists have developed a technique to treat glaucoma -- the second leading cause of blindness in the developed world.

The Iowa State University researchers said the procedure has been used successfully in rats and now will be used on canine patients. If successful, it will then begin human trials.

Assistant Professor Sinisa Grozdanic, Associate Professor Donald Sakaguchi, doctoral student Matt Harper and colleagues determined animals with glaucoma increase production of proteins with neuron-protective capabilities in an attempt to shield against blindness. So they imitated that process in the laboratory, modifying bone marrow-derived stem cells and transplanting them into lab rats eyes.

A computerized analysis showed dramatic improvement in the rat visual functions after the procedure.

"One of the really unique aspects of this approach is that we can isolate these stem cells from the same individual being treated," Sakaguchi said. "It eliminates the ethical issues associated with embryonic stem cells, and the immunological problems of graft rejection."

The team presented the study during a recent meeting of the Association for Research in Vision and Ophthalmology.

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