



# What's New in Ophthalmology Today?

## Interesting Advances in Macular Degeneration

During this past month important papers announced significant advances in the treatment of macular degeneration. 1. STEM CELLS derived from the bone marrow were programmed to repair damaged layer of the retina in mice according to Maria Grant, MD at the University of Florida. (August 3.) Removing the stem cells and then exposing them to genes connected to special viruses starts pushing the stem cells towards becoming retina cells. When the cells are then transplanted into the eye, they become one of several kinds of retinal cells. Mice that were previously blind were tested four weeks after receiving therapy. Their retinal responses were no different from the normal. This work applies to 85% of patients with macular degeneration. David Gamm, MD at University of Wisconsin-Madison School of Medicine reported similar results using skin derived Stem cells as well as embryonic stem cells. (August 25). 2. ARTIFICIAL RETINA PROJECT- (August 4) The Artificial Retinal Implant Vision Stimulator is the software that processes the information gathered by a small camera and transmits the images to an electrode array sitting in the retina of the eye. The messages are then sent to the back of the brain known as the visual cortex where "seeing" takes place. The group from USC Keck School of Medicine and a group from Caltech are currently working on a 1000 pixel model which would allow people to recognize faces and to read. Currently 29 patients have this implant. 3. CATARACT SURGERY IN PATIENTS WITH DRY MACULAR DEGENERATION does NOT cause any worsening of the macular degeneration. Furthermore, significant improvement in vision is achieved after cataract surgery. This was reported in the journal Ophthalmology on August 24. The increase in vision does depend on the severity of the macular degeneration.

Important research in macular degeneration is bringing us much closer to a cure.

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