



# The Magnifier

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Issue #76 January - February, 2010

## **PRODUCT ALERT! TREKKER GPS - A NAVIGATIONAL DEVICE FOR THE BLIND AND VISUALLY IMPAIRED.**

A revolutionary system that uses GPS and digital maps to help people with blindness or low vision find their way in urban and rural areas. Trekker GPS users can pinpoint exactly where they are, learn about area attractions, and find out how to get to specific destinations.



GPS lets them know their location, anywhere in the world, with continually growing precision. For more information on how to purchase (\$1695.00) and where to get training, call (1-800) 369-0347.

## **Macular Degeneration Foundation**

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P.O. Box 531313  
Henderson, NV 89053

Website:  
[www.eyesight.org](http://www.eyesight.org)

Telephone:  
1-888-633-3937

## **RESEARCHERS GROW RETINA CELLS FROM SKIN CELLS**

The study on the development of eye cells was published August, 2009 in the Journal Proceedings of the National Academy of Sciences. "Researchers at the University of Wisconsin have grown retinal cells from skin cells, a development that could be used to treat degenerative eye diseases. The researchers manipulated human skin cells to act like embryonic stem cells, which can be coaxed to grow into any tissue in the body. The development suggests that doctors may someday be able to repair damage to the retina with new cells generated from the patient's own skin."

## **BLUE LIGHT-FILTERING INTRAOCULAR LENS IMPLANTATION DURING CATARACT SURGERY INCREASES A NUTRITIONAL COMPONENT OF THE EYE**

"Results of an important new study show that implantation of blue light-filtering intraocular lens (IOLs) at the time of cataract surgery increases a nutritional component of the eye, which may afford protection against the development and/or progression of AMD. The study, conducted by leading ophthalmology and vision researchers from the Macular Pigment Research Group at the Waterford Institute of Technology in Ireland, is published in the October 2009 issue of the high impact journal Investigative Ophthalmology & Visual Science (IOVS).

(1)"AMD is a disease affecting the central part of the retina and is the leading cause of vision loss in the developed world.

(2)Implantation of lenses that do not filter blue light during cataract surgery has been shown to increase the risk for development and/or progression of AMD

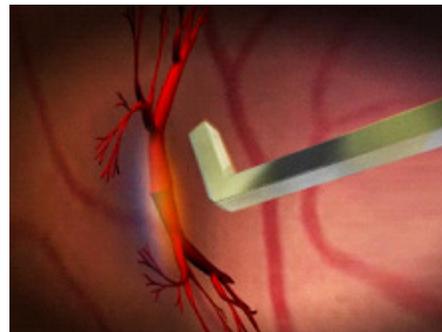
(3)Blue light-filtering lenses filter and block damaging blue light from reaching the retina, which holds the potential of reducing vision loss and improving the quality of life for millions of older patients," said the study's chief investigator, John M. Nolan, Fulbright Scholar, BSc, PhD, deputy director, Macular Pigment Research Group, Waterford Institute of Technology.

(4)These data represent an important first step in fully realizing the benefits of blue light-filtering in improving a nutritional component of the eye known as macular pigment. There is a strong scientific rationale supported by an ever-growing body of scientific evidence which suggests that macular pigment plays a role in reducing the onset and progression of AMD"  
ADVANCED CELL TECHNOLOGY, Inc. (ACT) filed an Investigational New Drug (IND) application on November 18, 2009, to conduct a phase I/II trial using hESCs to treat a genetic eye disease. "I'm cautiously optimistic," said Marco Zarbin, a researcher from New Jersey who would participate in the proposed trial. "Of all the places in the body where I can imagine cell-based therapy working is in the eye." ACT proposes to transplant hESCs that have been differentiated into retinal pigment epithelial cells into SMD (Stargardt's Macular Degeneration) patients in hopes of improving visual acuity. The trial will involve a total of 12 patients and three clinical sites. Advanced Cell Technology, Inc. is a biotechnology company applying cellular technology in the field of regenerative medicine. For more information, visit <http://www.advancedcell.com>.

### **SURGEONS USE RADIATION BEAMS TO HALT MACULAR DEGENERATION**

NeoVista Epimacular Brachytherapy System In UK Clinical Trial by Andrew Nusca, Nov 23, 2009  
Surgeons have pioneered a technique that uses pinpoint beams of radiation to restore eyesight to blind people.

The therapy, developed by British doctors at Kings College Hospital in London, kills abnormal blood vessels at the back of the eye that cause macular degeneration. The new treatment needs only a single visit to hospital, where surgeons thread a probe into the eye until it reaches the abnormal area in the retina. Once the probe is in place, a precisely-timed dose of radiation - in a beam 5.4mm wide - kills the problematic blood vessels.



Surgeons are performing a trial of the technique on 363 patients at 15 hospitals around the country to ensure that the tiny radiation dose is safe. (The probe's proximity to the area of damage keeps the radiation from significantly penetrating surrounding normal tissue.) "To date, over 400 patients have been treated safely with epimacular brachytherapy in our comprehensive clinical program," said John N. Hendrick, president and chief executive officer of NeoVista.

### **LOOKING FOR LOW-VISION PRODUCTS?**

The following vendors may be called toll-free: Maxi-Aids (1-800-522-6294); Independent Living Aids (1-800-537-2118); or Enhanced Vision (1-888-811-3161).

### **EGG YOLKS HELP REDUCE SIGHT LOSS**

12/09: Researchers from Massachusetts University in the US have proven that by eating egg yolks regularly, people over 60 may be able to reduce the risk of age related sight loss caused by macular degeneration. Egg yolks are rich in lutein and zeaxanthin, nutrients that promote the production of visual pigments. A report in the American Journal of Clinical Nutrition explained that the Massachusetts study showed that "2 eggs per day is probably all that is needed to maximize blood levels of lutein and zeaxanthin". The study was carried out over a period of 5 months, and included 52 participants, with a mean age of 69 years.

## **GINGKO BILOBA IMPROVES MORE THAN JUST MEMORY**

In a comprehensive review of current scientific data, a clinical neuropsychologist has found that ginkgo biloba not only improves declining memory, but also offers considerable benefits for other cognitive functions. Ginkgo biloba has also been used to help patients recover from eye problems including glaucoma, diabetic eye disease and age-related macular degeneration. Ginkgo extract has been linked to the improvement of blood circulation, which may help the brain, eyes, ears and legs function properly.

## **PACIFIC UNIVERSITY'S COLLEGE of OPTOMETRY AWARDED \$75,000 GRANT TO Study The IMPACT OF EXCESSIVE LIGHT EXPOSURE ON EYE IN YOUNGER ADULTS**

The College of Optometry's Vision Performance Institute (VPI) has been awarded a \$75,000 grant from the Macular Degeneration Foundation (MDF) to conduct a three-year longitudinal study of the impact excessive light has on the aging process of eyes. Associate professor of optometry John R. Hayes said the award will allow the VPI to test hypotheses to determine whether or not the body's generation of lipofuscin, a waste product that accumulates in the eyes over an individual's lifetime, increases when the eyes are exposed to more light than they can fully process.

Laboratory evidence suggests this to be the case, Hayes said, adding that the oxidation of lipofuscin has been implicated in the development of diseases such as macular degeneration. Measuring lipofuscin accumulation and toxicity in humans is very difficult, according to Hayes. The approved study could potentially provide evidence that blocking exposure to short-wave light, also known as blue light, could protect against lipofuscin accumulation.

"Pacific University is in a unique position to provide a sample of healthy young adults with similar demographics exposed to significant differences of measured light," Hayes said. "We are able to randomly assign and measure the protective effect of blocking a portion of the light spectrum from entering the eye. This study will allow us to make a significant step forward in translating bench theory to clinical relevance." The VPI is the primary research arm of Pacific University's College of Optometry. Its mission is to perform vision research, develop vision-related product, and provide specialized eye care.

## **LIGHT TREATMENT: A PROSPECTIVE NEW DRUG DELIVERY FOR THE EYE**

Eye doctors might soon administer drugs into patients' eyes using pulsing light instead of needles. Research at the University of Texas Medical Branch department of ophthalmology and visual sciences has yielded promising results in laboratory tests, reported Dr. Bernard Godley, lead retinal specialist researcher, and department chairman. A recently awarded \$50,000 Texas Ignition Fund grant will help advance the research. Millions of eye patients could benefit from the safer, more comfortable, and noninvasive method of treating infections, wet macular degeneration, and other eye problems. Godley described the procedure: "Drug molecules in a gelatin disk similar to a soft contact are activated using pulsing light. The molecules begin to flutter like a butterfly and move through the eye wall into the eye. It would be a breakthrough in the treatment of eye diseases," Godley said.



**CALGARY, The Globe** - "Brian McKeever's wish has come true: He's about to carve his name in Winter Olympics history. The 30-year-old Canmore, Alta. resident will be selected to Canada's Olympic cross-country ski team on Friday, making him the first athlete to compete at both the Olympic and Paralympic Winter Games.

Mr. McKeever, who suffers from Stargardt's disease and is legally blind, stamped his double pass to Whistler by winning an able-bodied 50-kilometre Haywood NorAm race last month in Canmore. The race was one of four Olympic trials established by Cross Country Canada." (Picture by Chris Bolin, The Globe)

### **THE BILBERRY HAS A LOT TO OFFER**

#### **The Human Body**

The positive effects of bilberry on the eyes are largely due to the flavonoids that build up the collagen in the blood vessels and help to protect your sight as well as the sensitive areas around your retina. In a double-blind, clinical trial, 50 volunteers with cataracts took a mixture of vitamin E and bilberry extract for four months and 97 percent stopped the progress of the cataract on the lens.



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### **CONTACTING MDF**

To speak to a support representative directly, you may call 1-888-633-3937. If you reach our voice mail, please speak slowly and distinctly.

### **MAKING CONTRIBUTIONS:**

Please make checks payable to Macular Degeneration Foundation, Inc., P.O. Box 531313, Henderson, Nevada 89053, or you may use your credit card on our web site <http://www.eyesight.org>. Your contributions make our services available as a support system for macular degeneration patients in the following ways:

1. We provide toll-free lines for personal contact assistance.
2. We mail brochures and other printed materials upon request.
3. We support an award-winning web site that provides the latest up-to-date information.
4. We fund research proposal grants to provide therapies for both the wet and dry form of AMD. Contributions marked "research" are used 100% for research.

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MDF was founded in 1992 by Edmund J. Aleksandrovich Ph.D (a victim of macular degeneration). It provides MD patients and their families with the information necessary to understand the disease, the latest news concerning ways to cope with the disease, and supports the efforts of researchers to find a cure.