



# The Magnifier

---

Issue #78 May - June, 2010

## **REPORTS: AMD ALLIANCE CONFERENCE** **By Dan Roberts - Directory of MD Support**

### **New Stem Cell Development**

University of California Irvine scientists have created an eight-layer animal retina from human embryonic stem cells. This is the first three-dimensional tissue structure to be made from stem cells, and it could be a big step toward retina replacement in eyes affected by macular degeneration. It is an advancement over creation of single cell layers, since the multi-layered human retina might then be replaced in its entirety in one procedure. The researchers are testing the early-stage retinas in animal models in hopes that success will lead to human clinical trials.

### **Macular Degeneration Foundation**

---

P.O. Box 531313  
Henderson, NV 89053

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

Telephone:  
1-888-633-3937



### **Are Genetic Testing Kits Valid for AMD?**

Commercial advertising is beginning to appear for a variety of genetic testing kits on the market. Be advised that not enough is yet known about the pathology of AMD to give these tests unassailable validity. Scientists still have much to learn about environmental and behavioral influences on AMD development before predictions can be made based upon such generalized tests. There is value, however, in going through a genetics counselor at a reputable hospital-based clinic, or at least sharing the results of a home test with such a professional.

### **More Evidence of AMD Declining**

A new study has shown a 68% lower incidence of macular degeneration in the Baby Boom population. The research, led by Karen J. Cruickshanks, MD (University of Wisconsin School of Medicine and Public Health in Madison) suggests that improvements in environment, behaviors, and other such modifiable factors may have contributed to the results. The "birth cohort" effect remained even after adjusting for AMD risk factors such as obesity, heavy drinking, and sunlight exposure. More study is necessary as the younger population continues to age, but the results further emphasize the importance of environmental and lifestyle factors to retinal health.

### Notes from Conference:

We should remember that the Comparisons of Age-Related Macular Degeneration Treatments Trials (CATT) will not lead to FDA approval of Avastin for treatment of wet AMD. It may or may not confirm what we already know, but the drug will, in either case, remain on off-label status. This is considered the AMDAI to be an ongoing safety issue, since Avastin trials are not likely.

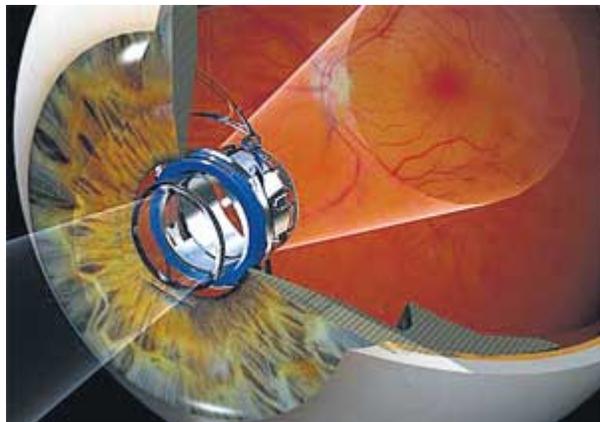
Science is getting closer to understanding the pathophysiology of AMD, and the pace is increasing. We may soon see a gene replacement treatment for Stargardt disease and retinitis pigmentosa. We are not, however, as close to gene therapy for AMD, since the genetic connections are much more complicated.

Neurotrophic drugs will soon be available and effective for treatment of dry AMD. See [www.mdsupport.org/library/ect.html](http://www.mdsupport.org/library/ect.html) for information about one of the leading drugs, called CNTF.

38 patients with retinitis pigmentosa are now in Phase 2 trials testing a 2nd-generation version of Second Sight's implanted retinal prosthesis. This newest design includes an array of 64 electrodes, which is allowing previously blind subjects to receive some visual perception. This would not be suitable for people with AMD. For more information about Second Sight's research, see [www.2-sight.com](http://www.2-sight.com).

### FDA OK's IMPLANTABLE TELESCOPE TO AID VISION by Eye Doc News

VisionCare Ophthalmic Technologies, Inc., a developer of advanced visual prosthetic devices, recently announced that the FDA had approved the company's Implantable Miniature Telescope (by Dr. Isaac Lipshitz) to improve vision in patients with end-stage age-related macular degeneration (AMD). VisionCare's telescope implant is integral to a new patient care program, CentraSight, for treating patients with end-stage macular degeneration.



The telescope is indicated for monocular implantation to improve vision in patients greater than or equal to 75 years of age with stable severe to profound vision impairment (best-corrected distance visual acuity 20/160 to 20/800) caused by bilateral central scotomas (blind areas) associated with end-stage AMD (for patients, endstage AMD causes severe to profound central vision loss constituting statutory blindness in both eyes due to either wet AMD that has progressed to scarring of the macula despite drug treatments, or dry AMD that has progressed to geographic atrophy, the most advanced form of dry AMD). The magnification provided by the implant reduces the impact of the blind spot caused by end-stage AMD.

Smaller than a pea, the telescope is implanted in one eye in an outpatient surgical procedure. In the implanted eye, the device renders enlarged central vision images over a

wide area of the retina to improve central vision, while the non-operated eye provides peripheral vision for mobility and orientation.

### **CAN BLUEBERRIES HELP PROTECT AGAINST MACULAR DEGENERATION?**

Oxidative stress is a major contributing factor to age-related macular degeneration. The flavonoids in blueberries with their potential anti-oxidant and free radical scavenging action prevent free radical damage.

However, it's the anthocyanidins in the blueberries that help to recycle the rest of the vitamins in your body. Anti-inflammatory properties of blueberries work to strengthen your blood vessels. Just a quarter of a cup serving will do the job. Blueberries, because of their high content of flavonoids, actually make the collagen (the main protein of connective tissue) stronger by adhesion and cross linking with the collagen. They possess the property of permeability which can improve circulation and feed the capillaries by altering the ability of fluids and nourishment to pass through, inhibiting free radical damage and improving the tone of the entire vascular system by strengthening all of the veins and the arteries. This fact alone can improve the body's ability to address risk factors that range from Macular Degeneration to Bone loss. Extract of Blueberry is available commercially under the name of Bilberry which is the "Old English" name for blueberry.

### **DREYFUS FOUNDATION GRANT HAS MADE ARTISTIC VISION POSSIBLE**

'Sight Loss Services, the Cape Cod Museum of Art, and the Dennis Memorial Library's Low Vision Center have joined resources to offer painting and sculpture classes for the visually impaired,' said Laura Peterson, executive director of Sight Loss Services. Classes are being taught by award-winning Cape artist Frances McLaughlin, who is visually impaired. McLaughlin introduced the first assignment by giving each student a red, green, or yellow apple. 'Feel it, smell it, taste it if you like,' McLaughlin said. 'I am asking you to paint the essence of your apple and to express your personality in your painting.' Students were provided canvases and blobs of acrylic paint in each primary color. After a quick lesson on blending colors, McLaughlin encouraged students to use their creative mind's eye to give their apple paintings a personal signature. They were there for the therapeutic warmth of understanding and the need for self-expression. For more information on Sight Loss Services in Worcester, Mass., call 508-394-3904.

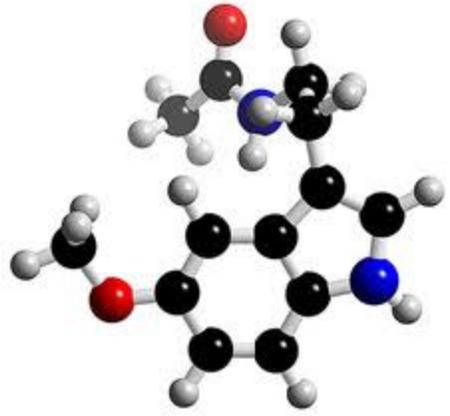
### **CLINICAL USES OF MELATONIN: EVALUATION OF HUMAN TRIALS**

"During the last 20 years, numerous clinical trials have examined the therapeutic usefulness of melatonin in different fields of medicine. The efficacy of melatonin has been assessed as a treatment of ocular diseases (such as macular degeneration and glaucoma), blood diseases, gastrointestinal tract diseases, cardiovascular diseases, diabetes, rheumatoid arthritis, fibromyalgia, chronic fatigue syndrome, infectious diseases, neurological diseases, sleep disturbances, aging and depression.

**The conclusion of the current review is that the use of melatonin as an adjuvant therapy seems to be well founded for:**

- Macular degeneration,
- Glaucoma,

- Protection of the gastric mucosa [stomach lining],
- Irritable bowel syndrome,
- Arterial hypertension,
- Diabetes,
- Side effects of chemotherapy and radiation in cancer patients or hemodialysis in patients with renal insufficiency,
- And, especially, for sleep disorders of circadian etiology (jet lag, delayed sleep phase syndrome, sleep deterioration associated with aging, etc.) as well as in those related with neurological degenerative diseases (Alzheimer's, etc.) or Smith-Magenis syndrome.



(Source: Current Medicinal Chemistry, Apr 28, 2010. PMID: 20423309, Sánchez-Barceló EJ, Mediavilla MD, Tan DX, Reiter RJ. Department of Physiology & Pharmacology, School of Medicine, University of Cantabria, Santander, Spain)

### **More on Melatonin**

Melatonin is one of the many protective antioxidants that the retina naturally produces. It is considered the most powerful in the protection of nuclear and mitochondrial DNA. The production of melatonin may be suppressed by light, with the peak sensitivity in the 446 to 477nm (blue light) portion of the visible spectrum. For this reason it is recommended, for full protection, sunglasses with UV protection in that range be worn in the summer and winter. One company that provides a product with this protection is Optogon Corp. If you are having difficulty finding a product that meets this standard, call 1-800-924-4393

### **NATIONWIDE STUDY: JULES STEIN EYE INSTITUTES AT UCLA CLINICAL RESEARCH VOLUNTEERS NEEDED**

#### **THE GENETICS AND RISKS FOR AGE-RELATED MACULAR DEGENERATION**

Individuals from 49 to 65 years old and have at least one parent with macular degeneration. We will include their spouses or partners.

The parent(s) who have age-related macular degeneration or have a first-degree relative with the disease (siblings).

1 saliva sample or blood draw required.

We need your permission to allow us to view your eye care records and collect and store your DNA.

Photographs of the retina will be covered by the study.

No need to travel to UCLA.

Option to have free evaluation and photos done at UCLA. Parking available. No other compensation or other reimbursement will be provided.

**Call Dr. Michael B. Gorin or a research coordinator at  
1-800-286-8581 for more information**

---

**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.

=====

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.