

# NEWS

## Macular Degeneration Research



BETTER HEALTH THROUGH RESEARCH

SUMMER 2008

### IN THIS ISSUE

#### AMD Doubles Risk for Heart Attack and Stroke

Macular degeneration may share risk factors with vascular disease

Page 1

#### Scientists Discover Major Cause of Dry AMD

Findings offer new hope for treatment of vision loss

Page 2

#### President's Corner

Just the facts

Page 2

#### NIH Trials to Compare Leading Drugs

Results could determine which medicines are prescribed for wet AMD

Page 3

#### New Technology Enhances Digital TV Watching

AMD sufferers may enjoy a new world of entertainment

Page 3

#### Research Roundup

Page 4

#### A Retirement Plan that Gives Back

Charitable gift annuities benefit givers and receivers alike

Page 4

## AMD Doubles Risk for Heart Attack and Stroke

*Macular degeneration may share risk factors with vascular disease*

People with age-related macular degeneration (AMD) are at least twice as likely to die from stroke or heart attack, according to a new study conducted at the University of Sydney in Australia.



The study, published in the *British Journal of Ophthalmology*, found that people with early-stage AMD had double the risk of dying from heart attack or stroke over the next 10 years. Patients with late-stage AMD were five times likelier to die from heart attacks and ten times likelier to die of stroke.

“Both ophthalmologists and general practitioners should be aware of this potential link,” says lead researcher Dr. Paul Mitchell, “and need to consider appropriate management of traditional vascular risk factors.”

Researchers theorize that the higher risk could mean that AMD and vascular disease share common risk factors, including smoking, hypertension and systemic inflammation.

“Patients and physicians should recognize that patients diagnosed with AMD are more likely to have underlying cardiovascular disease and subsequent events and take appropriate steps to lower that risk through lifestyle changes and cardiovascular protective therapies,” said Dr. Gregg C. Fonarow, professor of cardiology at the University of California, Los Angeles.

In other findings, a team of British scientists found that genes that produce inflammatory chemicals like interleukin 8 are much more commonly found in people with AMD. This discovery could ultimately pave the way for genetic screening for the disease, as well as targeted medications.

Macular Degeneration Research is a Program of the American Health Assistance Foundation

22512 Gateway Center Drive, Clarksburg, MD 20871 • [www.ahaf.org](http://www.ahaf.org)

# President's Corner

## Just the facts

One of the most important weapons in fighting any disease is knowledge.

Unfortunately, that's the one thing too many of our seniors are lacking. According to a report by the Federal Interagency Forum on Aging-Related Statistics, nearly two-fifths of people age 75 and over lack even a basic level of health literacy – as opposed to 23 percent of people age 65 to 74 and 13 percent of people age 50 to 64.

As a result, many of America's older people may have difficulty navigating the health care system. They may also fail to get their vision tested regularly and to take the necessary steps to prevent or delay the progress of conditions like AMD.

That's why, at Macular Degeneration Research, we place a special emphasis on enhancing health literacy. If you know somebody who needs to get better informed about AMD, then by all means send them a copy of this newsletter. Or refer them to our Web site ([www.ahaf.org](http://www.ahaf.org), click on "Macular Degeneration Research.") One way or another, encourage them to take charge of their future – by learning as much as they can in the present.



Brian K. Regan, Ph.D.  
President

# Scientists Discover Major Cause of Dry AMD

## *Findings offer new hope for treatment of vision loss*

An international team of scientists has identified a receptor that causes the dry form of AMD – a discovery that has important implications for developing new therapies.

In an article published in the journal *PloS Medicine*, researchers with the Université de Montréal and Sainte-Justine Hospital show that a deficiency in the eye's CD36 receptor prevents oxidized lipids from being evacuated. As a result, these lipids build up and ultimately attack the layers of tissue beneath and above the retina – causing the central vision loss that is a key feature of dry AMD.

"This discovery brings us one step closer to treating dry AMD, which could significantly improve the quality of life of seniors who are most affected by this eye disease," says study co-author Dr. Huy Ong.

Ong's team has already found molecules that will activate the CD36 receptor. In the years ahead, researchers will determine if these molecules can be transformed into effective therapies for dry AMD, which comprises 90 percent of all AMD cases.



Log onto our website at [www.ahaf.org](http://www.ahaf.org) then simply click on the Macular Degeneration Research link to learn more about what's new in the world of research, as well as important information about risk factors for macular degeneration.

# NIH Trials to Compare Leading Drugs

*Results could determine which medicines are prescribed for wet AMD*

The National Institutes of Health has launched a head-to-head trial that will pit two leading AMD drugs – Lucentis and Avastin – against each other, according to an article in the *Wall Street Journal*.

Both drugs are manufactured by Genentech, Inc., and both are designed to inhibit the growth of blood vessels. Lucentis has been specifically approved for treating wet AMD; Avastin, though chemically similar, was first approved as a cancer treatment. However, some physicians have begun using Avastin in smaller repackaged doses because it is significantly cheaper and might allow for less frequent injections.

“This clinical trial will evaluate whether the treatment burden for patients can be reduced without compromising effectiveness,” said National Eye Institute director Paul A. Sieving.

Funded by the National Eye Institute, the trial, in its first phase, will administer monthly treatments to some 1,200 patients. Subsequent trials will experiment with different treatment schedules. The final results are projected for 2011.

A variety of resources are available for people who suffer from macular degeneration. For a list of agencies that offer counseling, training and other special services please call Macular Degeneration Research at **1-800-437-2423** or visit our website at [www.ahaf.org](http://www.ahaf.org).

# New Technology Enhances Digital TV Watching

*AMD sufferers may enjoy a new world of entertainment*



People with AMD will now be better able to watch and enjoy digital television, thanks to a new technique that enhances image contrast. Created by scientists at Schepens Eye Research Institute, the technique could give visually impaired people new access to information and entertainment enjoyed by mainstream audiences.

In the past, people with AMD have had trouble distinguishing faces and other details in televised images. Large television screens may help but can also be quite costly, and special telescopic glasses can bring certain details into focus but can also slice off parts of the image.

The new technique, developed by Dr. Eli Peli, professor of ophthalmology at Harvard Medical School, allows viewers to increase or decrease contrast with a remote control, creating images of greater clarity. Peli's is also the first such technology developed for digital TV.

In partnership with Analog Devices Inc., Peli is now developing a prototype chip that can be used in future television sets. “The technology we created is quite simple,” says Peli, “and can easily and cheaply be incorporated into even the newest technologies for television and Internet video.”

Peli adds that the technology will be useful both to the visually impaired and to those whose vision is changing due to age.

The *Macular Degeneration Research News* is published by Macular Degeneration Research, a program of the American Health Assistance Foundation, a nonprofit organization located at 22512 Gateway Center Drive, Clarksburg, Maryland 20871, 301-948-3244, 800-437-2423, [www.ahaf.org](http://www.ahaf.org).

The information in *Macular Degeneration Research News* is provided as a public service and should not in any way substitute for the advice of a qualified health care professional nor is it intended to constitute medical advice. The American Health Assistance Foundation does not endorse any medical product or therapy. Prior written permission is required for use of the material herein. Copies of the *Macular Degeneration Research News* are available upon request.

# Research Roundup

## *Stem-like cells can repair human retina*

A common class of cells found in the eye can be harnessed to build new retinal cells and repair the damage caused by AMD and other eye conditions, according to scientists with Schepens Eye Research Institute and Harvard Medical School.

“This study is very significant,” says principal investigator Dr. Dong Feng Chen. “It means it might be possible to turn on the eye’s own resources to regenerate damaged retinas, without the need for transplanting outside retinal tissue or stem cells.”

Chen’s team found that when the naturally occurring chemicals glutamate and aminoacidate were injected below the retina, they caused non-neuronal cells called Müller cells to divide and proliferate, giving rise to new photoreceptors, the same cells that are destroyed by AMD.

The scientists are now testing the procedure in animals to see if it directly improves vision.

## *First AMD animal model developed*

Researchers at Cleveland Clinic’s Cole Eye Institute have created the first ever animal model of AMD by modifying proteins found in mouse blood and triggering an immune-system response that mimics the characteristics of AMD.

Research team leader (and Chair of MDR’s Scientific Review Committee) Joe G. Hollyfield says the discovery “presents a significant opportunity to develop and test novel therapies to both prevent the disease and slow vision loss. Research conducted today may one day help find a cure for this progressive disease.”

## *Older Americans wealthier, living longer*

Today’s older people are more prosperous than any previous generation of seniors, says *Older Americans 2008: Key Indicators of Well-Being*, the latest in a series of periodic reports by the Federal Interagency Forum on Aging-Related Statistics.

The report also found that the aging of America, fueled by baby boomers, continues

to accelerate. Scientists expect the older population to double by 2030, when it will constitute nearly 20 percent of the total U.S. population.

In addition, the report found that, while Americans are living longer than ever before, life expectancy in the United States lags behind that of many other industrialized nations. Large numbers of older Americans also report chronic health conditions like arthritis and hypertension.

## A RETIREMENT PLAN THAT GIVES BACK

### *Charitable Gift Annuities benefit givers and receivers alike*

You can advance the work of Macular Degeneration Research *and* ensure a steady stream of income for yourself or your loved ones, by donating through a Charitable Gift Annuity.

A Charitable Gift Annuity is a contract under which you transfer cash or other assets, such as stocks or bonds, to Macular Degeneration Research. In exchange, you receive a fixed sum of money, paid out over a lifetime period.

An annuity can be set-up for one or two people – for example, a husband and wife, an aunt and a niece, or a father and a daughter. Married couples often choose a charitable gift annuity to help ensure that both spouses can enjoy an income they can rely on for life.

#### **What do annuitants receive?**

- Security of fixed payments for life;
- Flexible payments on *your* schedule (annual, semi-annual, quarterly or monthly);
- Income tax benefits;
- Attractive payment rates; and
- Research updates

For more information on this unique way of giving, contact Gayle Handiboe, Development Manager, at [gandiboe@ahaf.org](mailto:gandiboe@ahaf.org) or 1-800-437-2423.

*Thank you for thinking of Macular Degeneration Research!*