



Health News

Health Videos

Forum

Advertise

Contact



Personalization  
login | register

Search

powered by  
Google™

Follow us on:  
  


☒ News Archive [\[link\]](#)

☐ Web

☐ Wikipedia

☐ Medical Dictionary [\[link\]](#)

Eye Health / Blindness News	Useful Links	Video Library
-----------------------------	--------------	---------------

## Scientists Achieve Early Diagnosis Of Ocular Pathologies Such As Keratitis And Age-related Macular Degeneration

Main Category: [Eye Health / Blindness](#)  
Article Date: 26 Nov 2009 - 3:00 PST

 [email to a friend](#)  [printer friendly](#)  [view / write opinions](#)  [rate article](#)

Researchers from the UGR have provided an early diagnosis of certain ocular diseases that are very common today, such as age-related [macular degeneration](#) and keratitis, by applying an existing optical technique that, nevertheless, had never before been used for this purpose.

Scientists from the UGR have studied the image quality in subjects affected by one of these two pathologies, finding a greater amount of ocular aberrations and a higher level of scattering (term associated with the dispersion that light suffers when passing through the various ocular media) in affected eyes compared with results in healthy eyes. This significantly affects visual performance.

This work has been performed by the researcher Carolina Herrera Ortiz, from the Optics Department at the University of Granada, and directed by professors José Ramón Jiménez Cuesta and Francisco Pérez Ocón.

Age-related macular degeneration (ARMD) is the leading cause of central vision loss in developed countries, and mainly affects people of over 50 years of age. As far as keratitis is concerned, this condition causes inflammation of the cornea and can cause blindness, due to the severe alterations that the corneal surface may suffer.

### Optical instruments

To carry out this work, the scientists measured the image quality with two optical instruments and used a psychophysical test for assessing visual performance. Results from patients with ARMD were compared with those obtained from a control group of similar age without any ocular pathology. Thus, the researchers could verify that for individuals affected by this condition there is an increased level of ocular scattering that could be mainly due to the disruption suffered by the light reflected in the damaged retina of the ARMD eyes, because a priori optics are not expected to be altered, since it is a retinal pathology.

On the other hand, optical quality and visual performance have also been studied in patients affected by keratitis. Eyes affected by keratitis present a poorer optical quality and a reduced visual performance that improves significantly after the resolution of the pathology. Nevertheless, once medical treatment ends, eyes that suffered from keratitis still have a worse image quality compared to the contralateral healthy eye, a result that significantly influences visual performance even having reached the normal values of visual acuity.

### Visual quality characterization

The results of this research carried out at the UGR will make a full and objective characterization of visual quality in patients affected by any of these ocular pathologies. So far, the use of new techniques for assessing objectively the optic quality of the eye has been limited to studies on refractive or [cataract](#) surgery. However, as Carolina Ortiz Herrera suggests, this work "may be of particular interest to establish an early diagnosis of certain ocular diseases such as age-related macular degeneration, the main cause of central vision loss in developed countries."

Furthermore, this technique allows researchers to carry out a monitoring of possible stages of both diseases. Ortiz Herrera stresses the importance of including "both in the clinical practice of optometry and ophthalmology" the use of new techniques that, objectively, could indicate deterioration in vision even when the visual acuity values are normal, since "vision is not only seeing well, but providing quality and comfort."

The results of this PhD research led to two publications in journals of international

Ads by Google

New Stem Cell Treatment

Macular Degeneration treated using Retrobulbar Stem Cell Injections...

[www.XCell-Center.com/MacularDegen](http://www.XCell-Center.com/MacularDegen)

Current Article Ratings:

Patient / Public:	Not yet rated
Health Professional:	Not yet rated
Article Opinions:	0 posts

Find other articles on: ["University of Granada"](#)

News Category Menu

Eye Health / Blindness

Categories A-B >

Categories C-D >

Categories E-G >

Categories H-L >

Categories M-O >

Categories P-R >

Categories S-Z >

View full category list

News Options

Personalized Homepage

Weekly Newsletters

Daily News Alerts

What Is...

Hemophilia

Opioid Induced Constipation

Pneumococcal Disease

ADHD

Anxiety

Asthma

Atrial Fibrillation

Autism

Cancer

Diabetes

Lung Cancer

Lupus

Medicare / Medicaid

Obesity and BMI

Pancreatic Cancer

Stem Cells

All 'What Is...' Articles

Conditions Information

Abscess (Dental)

Acid Reflux

Acne

ADHD

Agoraphobia

Alcoholism

Alopecia Areata

Alzheimer's Disease

AMD / Macular Degeneratio

Amnesia

Health Professional Sites

Ophthalmology

Urology

Other Navigation Links

About Us

News Licensing

Free Website Feeds

Free Tools & Content

Tell a Friend

Accessibility

Help / FAQ

Article Submission

Links

Contact Us

prestige such as Journal of Modern Optics and Cornea. They will be soon published in Current Eye Research.

Source: University of Granada

Please rate this article: **Patient / Public:** or **Health Professional:**  
(Hover over the stars then click to rate)  
**50 Hotels in Granada**  
Compare hotels and save up to 75%! Save time, book at [Booking.com](#)  
**Stop Macular Degeneration**  
[www.booking.com/hotels-granada](#)  
Regain Lost Vision With Dr. Todd's Proven no-Surgery or Drugs Approach  
[www.BetterVision.com](#)  
**Vaginismus? Pelvic Pain?**   
You Are Not Alone! Connect With Women & Read About Treatment Here.  
[www.Vaginismus.com](#)  
**China = Stem Cell Leaders**  
Patients are getting treatments and blogging about them openly..  
[www.stemcellschina.com](#)

**China = Stem Cell Leaders**  
Patients are getting treatments and blogging about them openly..  
[www.stemcellschina.com](#)

Any medical information published on this website is not intended as a substitute for informed medical advice and you should not take any action before consulting with a health care professional. For more information, please read our [terms and conditions](#).

**Contact Our News Editors**  
  
For any corrections of factual information, or to contact the editors please use our [feedback form](#).  
  
Please send any medical news or health news press releases to:  
[pressrelease@medicalnewstoday.com](mailto:pressrelease@medicalnewstoday.com)

Back to top

Back to front page

List of All Medical Articles

Privacy Policy

Terms and Conditions

© 2009 MediLexicon International Ltd

SHHRE

Eye Health / Blindness headlines

email to a friend

printer friendly version

weekly newsletter

daily news alerts

personalize your news

rss feeds

back to top

Ads by Google

**Boston Foundation -Sight**  
has developed a unique contact lens for Keratoconus that is comfortable  
[www.bostonsight.org/keratoconus.htm](#)

Ads by Google

Help Us Improve

click here

Please tell us what you think about Medical News Today...

**Swine Flu Updates**

- Latest Swine Flu News
- What is Swine Flu?
- Map Of H1N1 Outbreaks
- Swine Flu - Top 20 FAQ
- Daily Email News Alerts

Stick with Medical News Today for the latest news updates on swine flu.

Latest News For Eye Health / Blindness

**News From The American Journal Of Pathology, December 2009**  
27 Nov 2009

**Two Molecules That Affect Brain Plasticity In Mice Identified By Stanford Scientists**  
27 Nov 2009

**Earlier Diagnosis Of Ocular Pathologies Such As Keratitis And Macular Degeneration**  
27 Nov 2009

View more news...

Most Popular Articles For Eye Health

These are the most read articles from this news category for the last 6 months:

TOP ARTICLE

**Blind Woman's Tooth Helped Restore Her Sight**  
**17 Sep 2009**  
For the first time in the US surgeons used a rare procedure to help a blind woman regain her sight: they implanted her own tooth in her eye to hold a prosthetic lens in place...

**What Is Astigmatism? What Causes Astigmatism?**  
26 Jul 2009

**Glaucoma Symptoms Halted With Eye Drops, Study**  
06 Aug 2009

**Macular Degeneration: The 'See Food' Diet**  
24 Jul 2009

**What Is AMD? What Is Macular Degeneration?**  
01 Jun 2009

Ads by Google

**Ophthalmology Software**  
EMR und management software for eye care professionals  
[www.ifasystems.com](#)

**Disposable Instruments**  
Single-Use Surgical Instruments For Cataract and Refractive Surgery  
[www.malosa.com](#)

**ALS is Not Rare**  
Rapid and Relentless, it will kill someone you know. Stop ALS Now!  
[www.als.net/StopALS](#)

Latest Videos for Eye Health

**Improving Reading Vision**  
Aging can often mean losing the ability

http://www.medicalnewstoday.com/articles/172220.php

27/11/2009