

RETINA RESEARCH FOUNDATION NEWSLETTER

Foresight for Sight

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Retina Research Foundation Newsletter is published three times per year: Spring, Summer and Fall.

My Eyes? Now and in the Future

Answers to some of the most frequent questions doctors receive from their patients

Retina Research Foundation is fortunate to have Petros E. Carvounis, MD, serving on the Board of Directors. Below Dr. Carvounis answers some of the questions that have been raised about the importance of research and education to patient care.

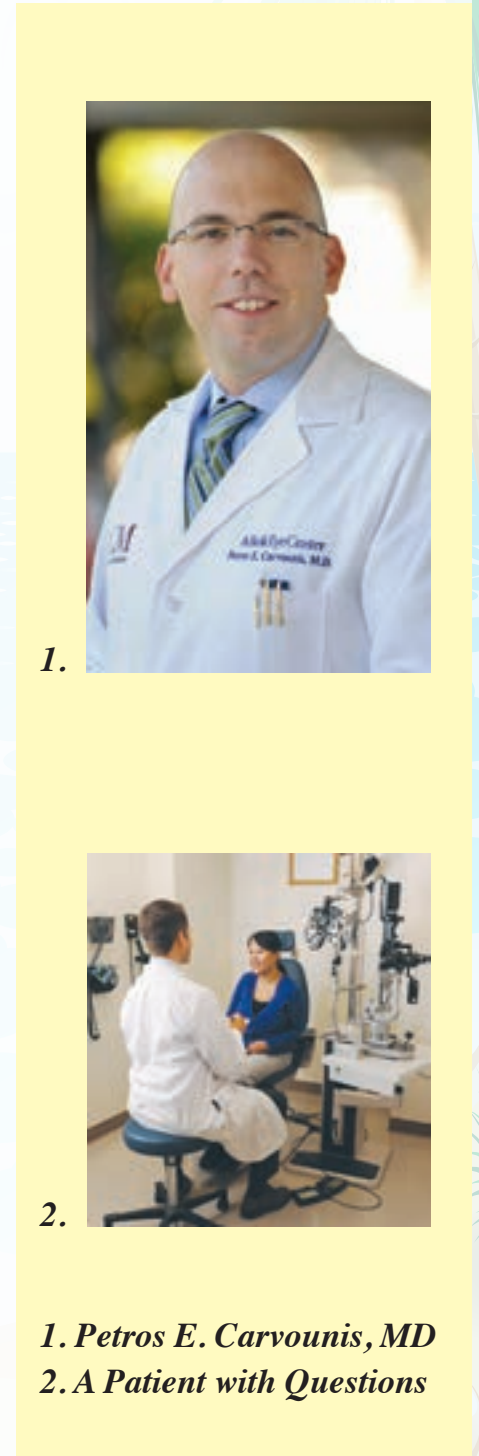
Patient's question:

What are some of the most significant advances in patient treatment that you have seen as a result of scientific discoveries over the past five, 10 and even 20 years?

Dr. Carvounis's answer:

The use of anti-VEGF injections for the treatment of wet age-related macular degeneration, macular edema associated with retinal vein occlusion and diabetic macular edema. These have really changed the life of patients with wet age-related macular degeneration: whereas previously the majority of patients would lose significant vision within two years of diagnosis, currently the majority is expected to lose no vision, while about a third of patients gain significant vision when they start treatment. Certainly the injections have to be repeated, sometimes monthly, although one of the newer agents can be administered to some patients every eight weeks with results similar to what we were seeing with the older agents being given every four weeks. The possibility of longer-lasting injections or gene therapy to decrease or eliminate the need for repeat injections is currently being pursued.

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1. Petros E. Carvounis, MD

2. A Patient with Questions

Patient's question:

What advances in patient care do you anticipate are just over the horizon or in clinical trials now?

Dr. Carvounis's answer:

There is intense research going on to discover a treatment that halts or reverses the progression of dry age-related macular degeneration. There are candidate treatments being tested in early studies at the present time, and I expect that a treatment will be found within the next five years or so. Gene therapy for a number of inherited retinal degenerations also looks promising, and we may well have a treatment (possibly a cure) for at least some forms of retinitis pigmentosa or Stargardt's (the commonest cause of macular degeneration in young individuals) within the next five years. Stem cell therapy is nowhere as close to being a successful treatment in clinical practice as the media sometimes suggest, and I doubt that anything will be forthcoming in the next five years from such treatment.

Bionic-eye type devices will greatly improve the ability of blind people to visualize their environment and function: the Argus prosthesis that is implanted on the retina has received FDA approval; BrainPort has already received approval by the European regulating authority and feeds information from a camera to the patient's tongue via electrical impulses. Both devices allow hitherto completely blind patients to get around and identify large objects; upgraded versions would be expected to have higher resolution and allow increased function.

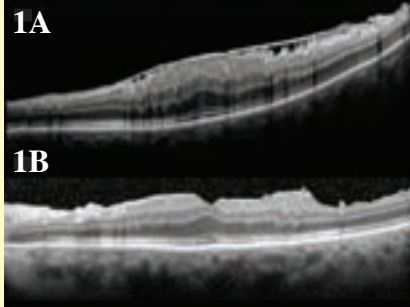
Patient's question:

How have advances in technology (OCT for example) changed the field of retina?

Dr. Carvounis's answer:

Optical coherence tomography (OCT) has revolutionized our understanding as well as our ability to detect macular pathology. OCT uses a very low-powered laser to scan the retina, and the reflections are used to make a cross-sectional map, similar in a way to how radar works to show details of a landscape or ultrasound to image the fetus except that it uses light instead of sound. The latest generation of OCT imaging has a very high resolution and allows views of the macula (the central part of the retina) that a decade ago would not have been possible. It has become an essential tool in the retina clinic.

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1A: The OCT is showing an epiretinal membrane that is causing distortion of the macula in the left eye of a 70-year-old lady, causing blurred vision (20/50) and distortion of the images the patient sees.

1B: Just four weeks following pars plana vitrectomy with membrane peeling, the OCT shows much improved appearance of the macula with concomitant improvement of the vision to 20/25!



With OCT, the clinician can:

- A.** detect very small amounts of fluid within or under the retina that allows an early diagnosis of wet age-related macular degeneration that prevents further vision loss; detection of fluid within or under the retina can also be used to guide the decision of whether to inject of anti-VEGF or not;
- B.** detect traction (pulling) from an epiretinal membrane or the vitreous gel on the macula, which may require surgery rather than injections;
- C.** detect macular holes;
- D.** detect a diabetic retinal detachment when there is blood partially obscuring the view, allowing the decision for prompt surgery to be taken;
- E.** monitor the response to surgery or treatment.

Patient's question:

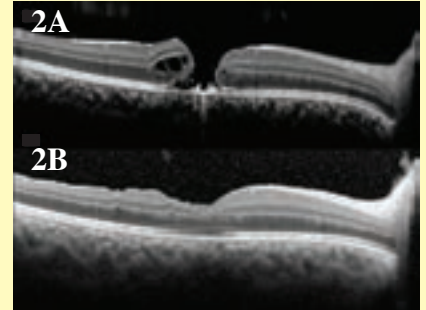
What role do fellowship programs play in patient care? Retina Research Foundation sponsors two programs of International Fellowships, ICO – Retina Research Foundation Helmerich Fellowships and Gillingham Pan-American Fellowships.

Dr. Carvounis's answer:

Fellowship programs are essential in order to train retina specialists. During ophthalmology training, trainees acquire some basic knowledge of retina pathology and some experience in its treatment but are not trained in retina surgery, and even in the United States, by and large, they do not have enough experience to treat retina pathology well. Ophthalmologists who want to learn how to perform retina surgery and become experts in the treatment of retina (posterior segment) disease undertake a two-year fellowship following completion of their training as ophthalmologists.

Internationally, there is a severe shortage of ophthalmologists in general, and in the developing world there are very few retina specialists.

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2A: The OCT shows a macular hole that was caused by a soccer ball injury to the right eye of this 15-year-old girl with a decline in vision to 20/70. It should be noted that macular holes are usually spontaneous events, more commonly in middle aged women in their fifth or sixth decade of life.

2B: The OCT shows closure of the macular hole, four weeks following surgery. After three months the vision improved to 20/25!



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Retina Research Foundation is dedicated to the eradication of retina disease through programs in research and education.



Cataract Surgery for People with Dementia



3.

According to preliminary clinical trial results reported at the Alzheimer’s Association International Conference this July in Copenhagen, Denmark, cataract surgery for people with dementia improves quality of life as well as vision. “This study supports the Alzheimer’s Association view that people with dementia retain, and benefit from, full healthcare treatment,” said Maria Carrillo, Ph.D., Alzheimer’s Association vice president of Medical and Scientific Relations. “As these new results show, improving sensory abilities, for example, can provide benefits in a variety of ways – for people with Alzheimer’s and also for their caregivers from whom unnecessary burden can be lifted,” Carrillo said.



4.

Alan J. Lerner, MD, of Case Western Reserve University and University Hospitals Case Medical Center and colleagues reported interim results from an ongoing clinical trial designed to measure the effects of cataract removal on visual ability, cognitive measures, and quality of life in people with dementia. This study evaluates vision and cognitive status, mood, and capability to complete daily activities following surgery.

Preliminary analysis of results from 20 surgical and eight non-surgical study participants demonstrated that the surgical group had considerably improved visual acuity and quality of life, reduced decline in memory and executive functioning, and improvements in behavioral measures compared with the non-surgical group. The levels of perceived burden for caregivers of people in the surgical group also showed improvement.



5.

“These preliminary results indicate that improved vision can have a variety of benefits for people with dementia and their loved ones, both visual and non-visual,” said Lerner.

3. Maria Carrillo, Ph.D.

4. Alan J. Lerner, MD

5. Cataract Patient

www.alz.org



John Van Ramshorst, Jr., Estate Gift

Thanks to an estate gift from John Van Ramshorst, Jr., of McAllen, Texas, Retina Research Foundation has established the Daniel M. Albert Chair at McPherson Eye Research Institute, University of Wisconsin-Madison. Beginning in 2014, the Albert Chair will support research in the area of eye disease. His gift to RRF is truly a “gift that will keep on giving.”



8.

Girls Club of McAllen among other charitable interests.

The inaugural holder of the Albert Chair is Christine M. Sorenson, PhD. Dr. Sorenson’s research focuses on the role Bim and Bcl-2 proteins play in modulating apoptosis during normal and aberrant



9.

Photo by Andy Manis

retinal neovascularization. Her laboratory is conducting studies that will aid our understanding of how to prevent unwanted loss of the retinal vasculature to maintain vision, for example in macular degeneration.

In 2005 Daniel M. Albert, MD, MS, founded the Eye Research Institute at University of Wisconsin-Madison and became its first Humble Director. In July 2012, the Institute was renamed McPherson Eye Research Institute. Dr. Albert has made extraordinary scientific contributions toward blindness prevention, and he was honored with the Laureate Award of the American Academy of Ophthalmology in 2013. Dr. Albert’s research focuses on ocular tumors.

Besides being a self-made successful businessman in the Rio Grande Valley of South Texas, Mr. Van Ramshorst devoted his time and talents to improving the lives of others. He served as an Advisory Trustee of Retina Research Foundation, and he supported the Boys and



6.



7.

6. John Van Ramshorst, Jr.

7. McAllen, Texas

8. Palm Tree

9. Christine M. Sorenson, PhD



Free Newspaper Service for the Blind

A free service sponsored by the National Federation of the Blind allows access to newspapers (national and local) and magazines to those who cannot read the print versions. Using a standard touch-tone phone, or an iPhone, the user can call a toll-free number to choose which newspaper, section, and article to hear. Over 300 newspapers are available.

A brief application is required to access this program, including certification that you are unable to read a printed newspaper. Call toll free for more information: 1-866-504-7300.

<https://nfb.org/audio-newspaper-service>



10.

My Eyes? Now and in the Future

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However, retinal disease has a worldwide distribution, and retina specialists are needed around the world. Given that there are almost no programs that train retina specialists in the developing world, retina specialists need to be trained in the United States, Canada or select centers in Europe. Usually, the cost for such training needs to be covered by a sponsor as these individuals cannot afford the living expenses in these countries. They then go on to establish retina services that were hitherto lacking in their countries of origin.

Petros E. Carvounis, MD, is an ophthalmologist specializing in macular degeneration, vitreoretinal diseases and surgery; Director, Vitreoretinal Fellowship Program; and Associate Professor of Ophthalmology, Cullen Eye Institute, Baylor College of Medicine, Houston, Texas.

“An investment in knowledge pays the best interest.”

***Benjamin Franklin
(1706 - 1790)***

10. Reading a Newspaper



Meet the Advisory Trustees

Helen Fourmy

Helen Fourmy grew up in the small town of Denison, Texas. After attending the University of Denver, due to economic reasons she returned to Texas to work in Dallas. While there, she attended business classes in the evenings and on weekends for several years. She married Thomas J. Fourmy, and they moved to Houston. Mrs. Fourmy met and was recruited by Venita Van Caspel, a young stockbroker just starting her own financial firm. Mrs. Fourmy obtained her stockbroker's license and principal license, and served as the Vice President of Van Caspel & Co, Inc. for over 20 years.

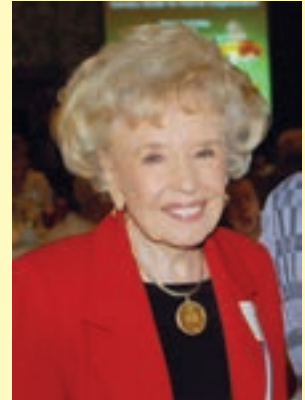
Mrs. Fourmy enjoys travel in Europe and Canada and has been to all 50 U. S. states; ballet; symphony; lunches and dinners with friends; reading; trying to conquer her computer; and enjoyed ballroom dancing with late husband Tommy (Fox Trot, Swing, Waltz and her favorite, the Cha Cha). Her interest in RRF dates to the '70s; she has admired all of the discoveries and advancements in eye care directly attributable to the Foundation.

Dean J. Stuessy

Dean Stuessy was born in Central Texas, graduated from Giddings High School and attended college in Austin and Houston. He began his insurance career in Austin at the State Board of Insurance (name later changed to the Texas Department of Insurance). Moving to Houston, he began employment at John L. Wortham & Son on July 1, 1973 and was elected a partner on August 1, 1976. Appointed to the executive committee, he served until retiring from Wortham on October 1, 2009. While at Wortham, he served as a Director and President of the Lone Star Insurance Company Captive. During this period, Wortham added offices in Austin, Dallas, Fort Worth, and San Antonio. He served on the Advisory Commercial Insurance councils of local, regional and national insurance companies.



Mr. Stuessy has been ranching since he was in high school, where he first became interested in livestock. He is a Lifetime Member of both the Houston Livestock Show and Rodeo and Beefmaster Association and currently runs cattle on two ranches in Texas. Married to Virginia Stuessy, they are blessed with two children, five grandchildren and one great-grandchild; and are members of the United Methodist Church.



11.



12.

11. Helen Fourmy

12. Dean J. Stuessy

13. Dean & Virginia Stuessy



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Retina Research Foundation Is a Nonprofit Organization.

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HANDICAPPED

CHANGE SERVICE REQUESTED

Please indicate changes in boxes and make any corrections needed next to your name and address, then clip and return entire address label in an envelope.

- Change name or address as shown on address
- Remove name from mailing list.

The National Institutes of Health (NIH) has made available to the public a website focused on senior health information. This site was developed by the National Institute on Aging (NIA) and the National Library of Medicine (NLM) both part of the NIH. Health topics include Healthy Aging, Memory and Mental Health, and Vision and Hearing.

The Vision and Hearing section covers diseases and conditions of the eye, healthy eyes, and low vision information.

To learn more: nihseniorhealth.gov

Special Rememberances

IN MEMORY OF

James Lockert Sleeper, Jr.
Luisa Taunton

ESTATE GIFT

John Van Ramshorst, Jr.

CORPORATE MATCHING GIFTS

RRF has received matching gifts from these corporations, thanks to the efforts of donors who are also employees or retirees of:

Chevron (Chevron Humankind)
ExxonMobil (ExxonMobil Foundation)
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Many thanks to our donors for multiplying their gifts through matching programs of these generous employers.



RRF accepts credit cards for donations securely online at www.retinaresearchfnd.org
Call the office for more information: 713-797-1925



Additional memorials received will appear in the next issue.