

Inside Retina

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News from the California Retina Research Foundation

OPHTHALMOLOGY IS A GLOBAL ENDEAVOR

A great deal can be learned from our ophthalmologic colleagues across the globe. The California Retina Consultants share their knowledge at conferences around the world and bring the best practices from other cities and countries back to California. In just this past year, California Retina Consultants physicians attended meetings in China, Australia, Japan, Egypt, Mexico, Denmark and numerous cities within the United States.



WORLD OPHTHALMOLOGY CONGRESS, HONG KONG, CHINA



Dr. Castellarin and Dr. Pieramici at the WOC in Hong Kong



This past summer, the World Ophthalmology Congress (WOC) held its biannual meeting in Hong Kong and Drs. Pieramici and Castellarin were among the 1,000 invited speakers who represented more than 110 countries. Over 10,000 delegates attended the meeting which featured world leaders in ophthalmology sharing the latest research and surgical techniques. It was quite fitting that China, site of the 2008 Summer Olympics and Paralympic games, hosted the premier international ophthalmology congress. This year's meeting featured over 330 scientific sessions including a vitreoretinal subspecialty day. The topics were timely and cutting edge, including the talks on ocular injuries and trauma by Drs. Pieramici and Castellarin.

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THE RESEARCH FRONT OPEN ENROLLMENT FOR NEW AND ONGOING CLINICAL TRIALS

Highlights of current or recently completed clinical studies are provided below. Your generous donations provide support to fund these trials – please help us discover better treatments to combat many blinding retinal diseases by considering a gift to the California Retina Research Foundation. Together, we can create a more visible future.

Contact our office if you are interested in participation in any of following trials.

Clinical Trial: CATT

Eligibility: For patients with wet AMD.

Goal: To compare the efficacy of Lucentis versus Avastin.

Two research trials are currently accepting patients suffering from wet-macular degeneration. In the clinical trial known as CATT, (Comparison of Age-related Macular Degeneration Treatments Trials), the purpose is to compare the efficacy of two different drugs: Lucentis and Avastin. This study is funded by the National Eye Institute, a branch of the National Institutes of Health. Patients with previously untreated wet-macular degeneration are eligible. All patients in this trial will receive one of the two drugs on either a fixed monthly dosage regimen or variable dosing regimen based on the presence of fluid in the back of the eye. Follow-up is monthly for two years.



Clinical Trial: Comentis

Eligibility: Patients receiving Lucentis or Avastin to treat macular edema.

Goal: To determine outcome and success of using an eye-drop solution concurrent with Lucentis or Avastin.

The Comentis Study is for patients who receive frequent injections of Lucentis or Avastin for recurrent macular edema due to neovascular age-related

macular degeneration. The new treatment in this study is an eye-drop solution called ATG003 (mecamylamine HCl) and it is used in combination with Lucentis or Avastin injections, to determine if the combination of these two therapies can reduce the number of injections of Lucentis or Avastin required, prolong the effects of the injections and/or reduce the need for repeat injections. All patients are seen monthly for one year.

Clinical Trial: Othera-Omega

Eligibility: Patients suffering from dry-AMD, closed to new participants.

Goal: To determine efficacy of OT-551.

In the Othera-Omega trial for dry-AMD (non-neovascular), patient follow-up is ongoing with an anticipated completion date of March 2009. A total of 126 patients from 15 sites throughout the country were enrolled. In this trial, patients applied an eye drop solution containing the compound OT-551 (Othera Pharmaceuticals) twice a day for two years. This study will determine if OT-551 can help slow the progression of dry AMD.

Clinical Trial: DRCRN

Eligibility: Patients with Proliferative Diabetic Retinopathy.

Goal: To determine the efficacy of combination treatments.

Two ongoing clinical research trials conducted by the

Diabetic Retinopathy Clinical Research Network (DRCRN) are investigating the combination of laser treatment with triamcinolone acetonide (steroid) or ranibizumab (Lucentis) for patients with (a) Proliferative Diabetic Retinopathy (PDR) and (b) Diabetic Macular Edema (DME). Patients that require laser treatment for PDR may be eligible for this trial if they meet additional eligibility criteria. Enrollment is open in the PDR trial. The DME trial was completed in December 2008 and is no longer enrolling pa-

IN THE NEWS

Clinical Trial: BRAVO

Eligibility: Closed.

Goal: To evaluate the use of ranibizumab injections in patients with macular edema.

Enrollment for the BRAVO Trial was completed in November 2008. Funded by Genentech, the purpose of the double-masked trial was to evaluate the use of ranibizumab injections (Lucentis-Genentech) in patients with macular edema due to a branch retinal vein occlusion. Patients received monthly ranibizumab or sham (placebo) injections for the first six months of the study. After six months, all patients received ranibizumab, if needed. In the third month, laser treatment was available for all patients who did not respond well to treatment. All patients were seen monthly for up to one year.

Although this trial is closed we are currently getting ready to start new clinical trails for patients with vein occlusions beginning in 2009.

DR. CARMEN PULIAFITO IS GUEST SPEAKER AT CALIFORNIA RETINA CONSULTANTS' ANNUAL EDUCATION MEETING



More than 120 eye care professionals attended the California Retina Consultants' 7th annual education meeting, held in October at Fess Parker's Doubletree Resort. Dr. Carmen A. Puliafito, Dean of the Keck School of Medicine at the University of Southern California, was the keynote speaker, addressing recent advances in the treatment of retina diseases, particularly for macular degeneration and diabetic retinopathy. Puliafito

has been described as a visionary with outstanding achievements in research, teaching and patient treatment. He commended the California Retina Consultants for their commitment to innovative research and thorough patient care.

YOUR VISION IS OUR MISSION. PLEASE SHARE OUR MISSION.

The California Retina Research Foundation (CRRF)

The California Retina Research Foundation is a non-profit organization based in Santa Barbara devoted to the prevention of blindness through the advancement of research in vitreoretinal diseases. The CRRF promotes collaborative and innovative research that demonstrates the potential for establishing effective new preventions, treatments and cures for many blinding retinal diseases. The CRRF is funded through the generosity of interested individuals and tax deductible donations can be submitted to California Retina Research Foundation at 515 E. Micheltorena Street, Suite G, Santa Barbara, CA 93103.

Phone: (805) 884-5185. email: crrf@californiaretina.com

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SUMMER INTERNSHIPS AT CALIFORNIA RETINA CONSULTANTS



Sarah Risard

Spencer Price

This past summer, Westmont, UC Berkely, UC Davis and UC San Diego college students and recent grads worked as research interns with the California Retina Consultants in various offices. For the past three summers, California Retina has employed a select few summer interns, thanks to generous grants from Cottage Hospital and the California Retina Research Foundation.

Dr. Robert Avery and Dr. Dante Pieramici interview candidates for the coveted positions. Dr. Avery states, “Our internship program provides hands-on experience under the tutelage of our highly qualified staff.” This past summer Stephanie Yaplee (senior, UC Riverside), David Conant (sophomore, UCSD), and Shannon Householder (freshman, UC Davis), completed the program and were able to shadow physicians in the clinic and observe surgical cases in the operating room.

They performed visual acuity examinations, operated the OCT machine and measured vital signs on clinical study patients. They also helped to conduct studies to evaluate surgical treatments of retinal detachments and the preoperative use of intravitreal bevacizumab (IVB) as an adjunct to vitrectomy for the treatment of complications of proliferative diabetic retinopathy.

Two interns from previous years became published authors this past year. Sarah Risard (junior, Westmont College) was the first author on one case report “Cystoid Macular Edema Secondary to Paclitaxel (Abbraxane)” and co-authored “Retinal Neovascularization Associated with a Retinal Arterial Macroaneurysm.” Spencer Price (junior, UC Berkeley) was the first author on a case report entitled “Choroidal Metastasis of Bartholin's Gland Adenoid Cystic Carcinoma.” All three case reports were submitted for publication in the peer-reviewed journal *Retinal Cases and Brief Reports*.

GENENTECH PLAYS SANTA AND BRIGHTENS CHRISTMAS FOR ONE CALIFORNIA RETINA CONSULTANTS PATIENT AND HER FAMILY

For Delfina Carillo-Moreno and her three young children, this was the best Christmas they have ever experienced. Yet for Delfina’s 3 ½-year-old daughter, Dalila, this has been a difficult year. Dalila suffers from a severe case of Coats’ Disease. She has been a patient of Dr. Couvillion’s for the past four months. Couvillion explains, “Coats’ Disease is a rare condition where there is abnormal development in the blood vessels behind the retina. The blood-rich retinal capillaries break open, leaking the serum portion of the blood into the back of eye, causing the retina to swell, often leading to partial or complete detachment of the retina.” Dalila’s case, like most, is unilateral, affecting only one eye.

Genentech graciously sponsored Dalila and her family this past Christmas, fulfilling her wish list with warm blankets, shoes, jackets, toys, books and an Alberston’s gift card that enabled the underprivileged family to enjoy a full cupboard this Christmas. The family emigrated from Mexico and resides in Santa Barbara, CA.



Dalila (lower right) and her family

Delfina was speechless, and full of tears when California Retina Consultants staff members delivered Genentech’s surprises. Ana Montalvo, surgical coordinator, helped deliver the gifts and reported that Delfina was thrilled and extremely appreciative, translating Delfina’s response, “The California Retina office has done so much for us, visiting our home, bringing us gifts and coordinating Dalila’s eye treatment. We feel like someone really cares.”

PATIENT SUPPORT GROUPS PROVIDE INSIGHT AND ENCOURAGEMENT

The loss of vision is overwhelming and life changing. Simple tasks that may have been taken for granted are now nearly impossible. California Retina Consultants recognizes the many challenges that vision loss creates and have therefore created new patient support groups in the Santa Barbara and Bakersfield offices. Led by Director of Research Melvin Rabena and Research Assistants Amy Sterling and Jessica Basefsky, the groups are a forum for patients to discuss how macular degeneration and other retinal diseases have affected their lives.

The Santa Barbara office hosted its first meeting in August 2008 and patients discussed driver's license renewals, sources for low vision aids, helpful books on macular degeneration, and emotions on dealing with the ultimate loss of sight.

The feedback was so positive that meetings now take place monthly and patients suffering from any type of retinal disease are invited to attend, along with their friends and family members.

The Bakersfield office held their first meeting in May 2008 and welcomed guest speaker Dr. Janae Vance, a low vision specialist who shared various visual aids to help those suffering from AMD. Attendees were able to demonstrate the visual aids and found many beneficial.

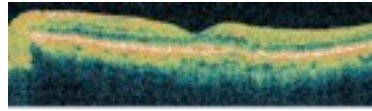
Staff member Amy Sterling attended the meeting and claims, "Although the group was small, I was amazed at how just a few people with age-related macular degeneration can really support each other."

The Low Vision Support Group meets the first Tuesday of every month in the Santa Barbara office, suite G, and the third Tuesday of each month in Bakersfield. For more information and to confirm meeting times, contact Jessica (Santa Barbara), (805) 884-5185 or Amy (Bakersfield) at (661) 325-4393.

CALIFORNIA RETINA ADOPTS IMPROVED SCREENING TECHNOLOGY

Optical coherence tomography (OCT), is a technology that has become an invaluable part of ophthalmic practices because it allows doctors to see the interior of the retina in a non-invasive and non-contact fashion.

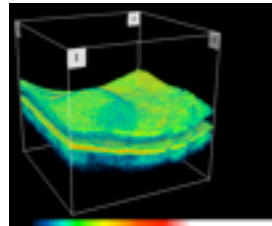
OCT performs cross-sectional or tomography imaging in the eye. The scan is analogous to ultrasound or radar, except that light is used rather than sound or radio waves to transmit data.



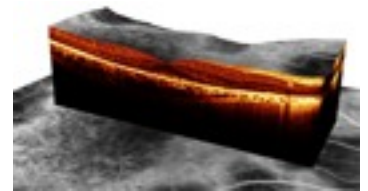
Zeiss Time Domain OCT

The first-generation OCT remains the gold standard, but recent transformations look promising. Newer generations of OCT are incorporating spectral domain technology in contrast to the older, time-sensitive domain technology. For doctors, this means higher image resolution and faster acquisition time. For patients, it means more informed results within a shorter period of time.

First-generation time domain OCT uses a moving mirror based interferometer to generate images. This reference mirror has to move back and forth with sequential scans. Because it depends on this mechanical moving part to perform its scans, time domain is a slower imaging modality. Because patient eye motion is occurring simultaneously, it is not feasible to use time domain OCT if precise mapping of the retinal tissue is required.



Topcon 3 D Spectral Domain OCT



Heidelberg 3 D Spectral Domain OCT

In contrast, in spectral domain OCT, the reference arm does not move. Instead, when the light is reflected back, the entire signal (at all wavelengths) is recorded in parallel by a spectrometer. Because all of the echoes are measured simultaneously as opposed to sequentially with the reference mirror, the process is 50 to 100 times faster than time domain OCT. The scan speed of the time domain OCT is 400 A-scan/sec, compared to the 29,000 A-Scan/sec of a spectral domain OCT. When the speed of OCT is increased, motion artifacts are reduced and digital processing is not required to align adjacent scans, resulting in more accurate retina scans.

Given the advantages of spectral domain OCT, California Retina Consultants has upgraded to this imaging technique in many offices.



SAN LUIS OBISPO OFFICE

California Retina Consultants is proud to announce that we are now seeing patients in San Luis Obispo. Located at 628 California Blvd., Suite D. San Luis Obispo, CA 93401

To schedule an appointment, call (805) 781-0292.

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