

Retina InSight



Volume 2

Winter 2015/2016

News from the Greater Houston Retina Research Foundation

RCH Retina Rangers Give Back at Houston VisionWalk 2015

Hearts were pounding and pulses racing at the 2015 Houston VisionWalk! For the 3rd consecutive year, the RCH Retina Rangers rallied to raise awareness for The Foundation Fighting Blindness (FFB) at the annual 5K VisionWalk. The nonprofit FFB funds critical research in search of treatments and cures for blinding retinal diseases. Since 2013, the RCH Retina Rangers have raised more than \$21,000 in support of the FFB.

To find out more about The Foundation Fighting Blindness and the Houston Visionwalk, please visit www.fightblindness.org. Please consider supporting the Retina Rangers at our 2016 Houston Visionwalk. Whether you would like to participate in the 5K, donate, or both, we would love to have you and your family as a part of our team!



The RCH Retina Rangers are off to the races at the 2015 Houston VisionWalk!

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New RCH Office Opens in Kingwood

RCH opened a new office in Kingwood in November 2015, providing northeast Houston convenient access to the latest technology, advanced treatments and cutting edge research for retina diseases. Our state-of-the-art medical space features 11 rooms for exceptional clinical and research patient care, as well as free parking.

Call 713-524-3434 or visit us online to make an appointment. This clinic is located at 350 Kingwood Medical Dr. Suite 200; Kingwood TX 77339.

RCH Doctors Dedicated to Treating Diabetic Retinopathy *The leading cause of blindness among working-age adults in the USA*

RCH is proud to be a dedicated site for the NEI/NIH-sponsored DRCR.network Protocol T trial which compared 3 medications for the treatment of diabetic macular edema (DME). This trial showed that eyes with more advanced diabetic disease may respond better to Eylea (also known as aflibercept) compared to the other 2 medications. RCH was the global leader for the world-wide VISTA & VIVID trial program that led to FDA approval of Eylea for the treatment of DME. David Brown MD presented complete 3-year data for the first time in July 2015 at the American Society of Retina Specialists meeting and is the lead author of the 2-year VISTA & VIVID published in *Ophthalmology*. See our RCH website for access to the publication.



DME with Central Vision Loss

Meet our GHRRF Doctors



Dr. David Brown meets with NASA to discuss future research endeavors.



Left to right: Dr. James Major Jr., Dr. Amy Scheffler, Dr. Richard Fish, Dr. Rosa Kim, Dr. Tien Wong, Dr. Charles Wyckoff and Dr. Ronan O'Malley ring in the Chinese New Year at our Bellaire office.

Dr. Eric Chen recently lectured at the 27th Annual Chinese Culture Community Health Fair.



GHRRF welcomes Dr. Ankoor Shah to the RCH family.



Dr. Matthew Benz was one of the leading authors in a ground-breaking study in the New England Journal of Medicine.



Making a Difference: The Davenports

The Disney classic *Lilo & Stitch* taught us that "Family means no one gets left behind or forgotten." The GHRRF strives to treat all patients with compassion and care as if they were our family members. Mr. Davenport has been a patient of Dr. Brown's at RCH since 2002 and his wife since 2006.

When Mr. Davenport joined the RCH family in 2002, he was noticing a blind spot in his left eye and was diagnosed with neovascular AMD. At that time, there were no approved treatments for this condition. Mr. Davenport was introduced to the research department in 2005 where he learned of a clinical trial that was testing a drug called ranibizumab (Lucentis) to treat AMD. Unbeknownst to him, Mr. Davenport would play a pivotal role in the testing and approval of this drug, now used worldwide to treat multiple blinding retinal diseases. Mr. Davenport says that "...while it is difficult to travel 200 miles to RCH, he would not have it any other way." The Davenports continue to travel for their study visits every four to six weeks.

Mrs. Davenport's experience at RCH has been just as important towards the advancement of retinal research. When she started seeing Dr. Brown in 2006, she was diagnosed with dry AMD and participated in a clinical trial validating the AREDS2 oral supplement composed of 6 key nutrients including lutein and zeaxanthin. This oral supplement was validated in 2013 to reduce the risk of AMD progression. Mrs. Davenport is currently happily participating in another clinical trial for advanced dry AMD which she believes "...is beneficial because it not only helps [me] but also helps others."

The Davenports are just one example of how the GHRRF works together as a family with our patients to ensure access to cutting edge trials. Every patient who participates in a trial receives outstanding personalized care that contributes both to their healthcare as well as the healthcare of future generations. Mr. and Mrs. Davenport have an extension of their family in RCH and the GHRRF. Mr. Davenport says he has "...entrusted [his] sight to Dr. Brown" and expresses his gratitude for the staff and doctors who have cared for him and his wife over the years.



Thomas & Neccia Davenport

Annual Greater Houston Retina Research Reception

The GHRRF prides itself on its talented research staff who endeavor to maintain RCH as the preeminent research site for studying vitreoretinal disorders. To celebrate our staff, RCH held an annual reception in July at Goode's Armadillo Palace in Houston and included an array of food, fun and entertainment. Doctors and staff members were awarded Certificates of Excellence for their individuality and strengths. Dr. Wykoff was presented with the Bunsen Burner Award, for the physician with the hottest ideas; while our newest research staff member, Sam Bennett, was presented with Rookie of the Year Award for being a rock star employee.



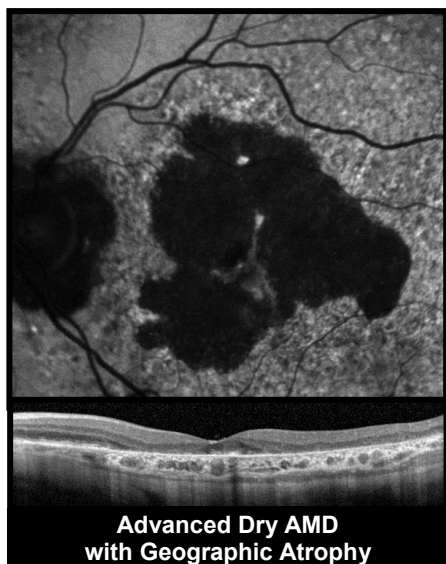
Left to right: Dr. David Brown,
Dr. Charles Wykoff, Dr. Rosa Kim,
Dr. Tien Wong and Dr. Matthew Benz

Highlighted Certificates of Excellence:

- **Melisa Bocanegra, Clinical Research Coordinator:**
First Responder Award, for the employee who is always ready to go when needed!
- **Ashley Chancey, Clinical Research Coordinator:**
JJ Watt Award, for the employee that was promoted in record time!
- **Eric Kegley, Research Imaging:**
High School Musical Award, for the employee most likely to break out in to song!
- **Cary Stoeve, Research Imaging:**
Little Miss Sunshine Award, for the employee who is a ray of light in the workplace!
- **Dr. Eric Chen, MD:**
Count on me Award, for the physician who always walks over from the OR with a smile!

GHRRF Plays Major Role in the Fight Against Diabetic Blindness

Since 1985, the only treatment for diabetic macular edema was laser photocoagulation which decreased the rate of severe vision loss in what is the most common cause of blindness in working age Americans. From 2012 through 2014 the FDA approved four new therapies that not only prevent vision loss but lead to vision gains in most diabetic patients. GHRRF was involved in all four of these clinical trials and was the worldwide site leader for three (Lucentis for DME: FDA approved 2012; Eylea for DME: FDA approved 2014; and Iluvein for DME: FDA approved 2014). This not only allowed Houston-area patients access to these sight saving therapies up to seven years before U.S. approval but also helped advance the care of therapies which are now available world-wide.



Dry AMD Treatment : Hope for Patients

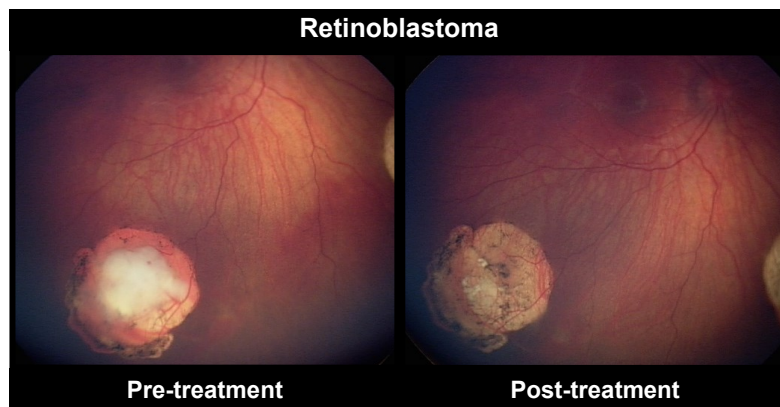
Patients with the neovascular (wet) form of AMD have excellent options for treatment. Unfortunately, patients with the advanced dry form, also known as Geographic Atrophy (GA), have no FDA-approved treatment options at this time, but hopefully this will change in the near future. RCH is a lead site worldwide and the only site in the greater Houston area participating in the global Phase III program assessing a new medication for the treatment of GA, lampalizumab. In completed Phase II studies, lampalizumab appears to be safe and potentially effective at slowing the rate of GA progression.

RCH is actively enrolling at both our Medical Center and Woodlands locations for this and many other dry AMD studies including both active treatment trials and observational studies.

Fighting Blindness, Saving Children's Lives

Carly Gustafson never suspected anything was wrong with her infant son Samuel. He seemed to be hitting every normal developmental milestone. All was well until he had his four month-old routine check-up with his pediatrician when the doctor noticed something unusual on his eye exam. As he flashed the light across Samuel's eyes, there was a white pupillary reflection in both of them.

The pediatrician immediately referred Samuel to a pediatric ophthalmologist who diagnosed him with retinoblastoma. Retinoblastoma is a pediatric cancer of the eye which can be blinding and fatal. Retinoblastoma is extremely rare with only 300 new patients diagnosed per year in the United States.



Samuel began traditional chemotherapy near his home in El Paso, Texas, but his tumors continued to grow. His ophthalmologist felt Samuel needed an expert team approach and referred him to RCH's Dr. Schefler. Together with her colleagues at Children's Memorial Hermann Hospital, Samuel received state of the art treatment for his retinoblastoma. Carly and her husband decided to move their family to Houston in order to be closer to Dr. Schefler and her team. Samuel's treatments involved cryotherapy, laser, and chemotherapy injections directly into the eye. The targeted treatment is designed to avoid toxic systemic effects that are typically experienced with standard chemotherapy such as hair loss, admissions to the hospital for low white blood cell counts, and hearing loss.



Carly and son Samuel Gustafson with Dr. Amy Schefler at the hospital

Today, Samuel is a thriving child who has done extremely well. He is growing and developing normally. When interviewed about the care her child received for his cancer, Carly Gustafson stated, "We are so thankful for the watchful care and concern Dr. Schefler and her staff have taken to help Samuel live like any other normal child. The dedication, knowledge, and state of the art approach of the staff and physicians has given Samuel a second chance. We are eternally grateful."

Preserving Vision After Cancer

At first, patient Patrick Hedderman attributed his blurry vision to common causes: dirty glasses, poor lighting or a problem with his previous LASIK surgery. One day, he was on the golf course when he finally covered one eye and realized, "Wow, my vision is really messed up."

After a lengthy exam at a retina specialist's office, Hedderman was instructed to see ocular oncologist Amy Schefler, M.D. of RCH the next day. Upon arriving with much anticipation, the Heddermans were greeted by the polite and professional staff of RCH and he underwent a series of sophisticated tests. "Even though the clinic was busy and had a lot of patients, at no time did we feel like Dr. Schefler was in a hurry," Hedderman said. "Dr. Schefler and the staff have an obvious passion for what they do and make the best out of a bad situation."

Dr. Schefler diagnosed Hedderman with uveal melanoma, a rare ocular cancer that affects 2,000 people in the United States. Before leaving RCH, Mr. Hedderman said he "knew it was a bad situation but I couldn't be in better hands. Having the best information you can have makes the process easier. Dr. Schefler was very forthcoming with the information



Dr. Amy Schefler and Patrick Hedderman

(continued from previous page)

- she was sensitive and caring but straightforward.” A few weeks later, Dr. Schefler performed plaque surgery on Mr. Hedderman, a radiation treatment which kills the tumor cells.

While plaque therapy allows patients to keep their eyes, the treatment often results in damage to the healthy structures of the eye. This condition is called radiation retinopathy and there is currently no FDA approved treatment for it. RCH doctors, led by Dr. Amy Schefler, created a prospective randomized trial, currently the only one of its kind in the U.S., to treat radiation retinopathy. Nine months after his plaque surgery, Mr. Hedderman enrolled in the trial. Hedderman said, “I thought, ‘if I can be a part of the study to help in the future, it’s not totally about me with this being a rare case.’ I wanted to help others and with a doctor of her stature, I wanted to be a part of the study.”

“Typically with uveal melanoma, after plaque treatment, we would see 20/400 vision on average, but Mr. Hedderman’s vision is currently 20/40,” Schefler said. When asked about his post-plaque radiation experience, Hedderman said, “There is no denying I’m not following the typical path [of vision loss]. I have confidence in the doctors and attribute the [clinical trial] injections from preventing further deterioration.”



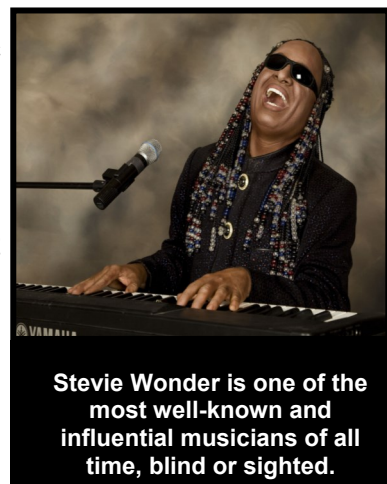
Examples of radioactive plaques used by Dr. Schefler to treat melanoma of the eye.

What Makes Blind Musicians So Gifted?

Several years ago, RCH’s Dr. Richard Fish lectured at the University of Houston and at the Museum of Fine Arts Houston on “Eye Diseases of Famous Artists”, covering Monet’s cataracts and Degas’ progressive vision loss, amongst others. This year, Dr. Fish (who plays in four different rock and roll & jazz bands) has turned his research attention to focus on the stories of blind musicians. George Frederic Handel lost vision late in his career and was probably operated on by the same ophthalmic quack who blinded Johann Sebastian Bach. Blind Tom Wiggins was an African-American slave and blind musical autistic savant who toured the country in pre- and post Civil War America, earning the equivalent of millions of dollars. He was the first African American to perform at the White House, and became the object of vicious legal custody battles until 1877, when he finally won his emancipation and became known as “The Last American Slave.” There was a long history of traditional blind minstrels in the Ukraine; an orchestra in Cairo comprised entirely of blind women who cannot see their music or conductor; and numerous blues musicians in the first half of the 20th century for whom “Blind” was added to their names as a way of promoting them. Art Tatum, a blind jazz pianist; Doc Watson, a blind country blues guitarist with severe corneal scarring; Andrea Bocelli, the magnificent Italian tenor who had congenital glaucoma; of course Ray Charles (congenital glaucoma), and the incomparable Stevie Wonder (retinopathy of prematurity) all have fascinating biographies and contributions to their individual musical genres. Dr. Fish has extensively researched and reviewed the biographical and musical histories of a large number of blind musicians, composers, and ensembles, detailing their ophthalmic histories.

A common finding in the scientific studies of blind musicians is the high level of brain activity in the occipital cortex—the portion of the brain that is used for visual processing. Blind musicians, through a process known as neuroplasticity, seem to develop their extraordinary abilities in part by a rewiring of the brain structure that shifts auditory skills and musical processing into areas of the brain that are normally used for vision. For instance, a very high number of blind children have perfect pitch, even if they are not musicians.

Dr. Fish has created a Spotify playlist of his favorite pieces by blind musicians, available on the RCH website and RCH facebook page. He has a manuscript in preparation and upcoming lectures in 2016 on the topic.



Stevie Wonder is one of the most well-known and influential musicians of all time, blind or sighted.

Greater Houston Retina Research Foundation

Enrolling Clinical Trials

The GHRRF is constantly designing and enrolling new clinical trials for patients affected by blinding retinal diseases. Patients are thus able to have access to cutting-edge investigational treatments that are not otherwise available to the general public. Here is a partial list of our currently enrolling clinical trials along with their identifying clinicaltrials.gov number:

Wet Age-Related Macular Degeneration Trials

- NCT02307682** Phase 3 trial: Intravitreal Potent Small Anti-VEGF molecule vs. aflibercept
NCT02462928 Phase 3 trial: Unique Mechanism intravitreal VEGF inhibitor vs. ranibizumab
NCT02418754 Phase 2 trial: Safety/efficacy of intravitreal combined anti-VEGF/ Anti-PDGF blocker
NCT02484690 Phase 2 trial: Safety/efficacy of intravitreal combined anti-VEGF/ Anti-Ang 2 blocker
NCT02358889 Phase 2 trial: Novel intravitreal tissue factor inhibitor alone and in combination with ranibizumab
NCT02387957 Phase 3 trial: Intravitreal anti-PDGF blocker in combination with approved anti-VEGF inhibitor
NCT01674569 Phase 2b trial: Oral tyrosine kinase inhibitor in combination with aflibercept
NCT01748292 Phase 3 trial: Validating the standard of care treat & extend regimen for AMD vs. monthly therapy
NCT02510794 Phase 2 trial: Refillable sustained release anti-VEGF surgical implant vs intravitreal ranibizumab for wet AMD
NCT02228304 Phase 1 & 2 trial: Continuous sustained release anti-VEGF surgical implant vs intravitreal aflibercept for wet AMD
NCT02511613 Phase 2 trial: Topical squalamine drop plus intravitreal ranibizumab vs intravitreal ranibizumab alone

Dry Age-Related Macular Degeneration Trials

- NCT02247531** Phase 3 trial: Intravitreal anti-complement Factor D for geographic atrophy
NCT02503332 Phase 2 trial: Intravitreal blockade of complement system at C3 for geographic atrophy
NCT02228304 Phase 1 & 2 trial: Surgical neural stem cell implantation for the treatment of geographic atrophy
NCT02479386 Observational trials looking at biomarkers for progression of dry AMD
NCT02399072 Observational trials looking at biomarkers for progression of dry AMD

Diabetic Macular Edema Trials

- NCT02302079** Phase 2 trial: Oral anti-Vascular Adhesion protein alone and in combination with ranibizumab
NCT02348918 Phase 2 trial: Intravitreal anti-integrin blocker for DME
NCT01909791 Phase 3 trial: Treatment of eyes with very good visual acuity
NCT01945866 Phase 2 trial: Combination corticosteroid & ranibizumab for persistent DME in pseudophakic eyes
NCT01934556 Phase 1 & 2 trial: Treat & extend management using ranibizumab with and without focal laser

Posterior Vitreous Detachment Trial

- NCT02435862** Phase 2 trial: Intravitreal anti-integrin blocker to promote PVD in diabetic eyes

Retinal Vein Occlusion Trial

- NCT02303184** Phase 2 trial: Novel suprachoroidal space injection of corticosteroid with aflibercept vs. aflibercept

Uveitis Trials

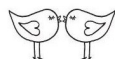
- NCT02374060** Phase 4 trial: Periocular and Intravitreal corticosteroids for uveitic macular edema
NCT01526889 Phase 2 trial: Novel intravitreal therapy vs conventional therapy for active non-infectious uveitis
NCT01358266 Phase 3 trial: Intravitreal injections of an immunosuppressive for active non-infection uveitis

Nevus/Melanoma Trials

- NCT02222610** Phase 2 trial: Ranibizumab for the treatment of radiation retinopathy
NCT01773655 Diagnosis of nevus or melanoma to determine the prevalence of germline BAP1 mutations

Coming soon:

Multiple prospective trials investigating therapeutics for non-proliferative diabetic retinopathy for disease modification



Research Department Special Announcements



Research Assistant, Diana Rodriguez, married her high school sweetheart of 15 years, Ignacio.



Pre-med Research Assistant, Rui Wang, proposed to his college love, Gail, in October.



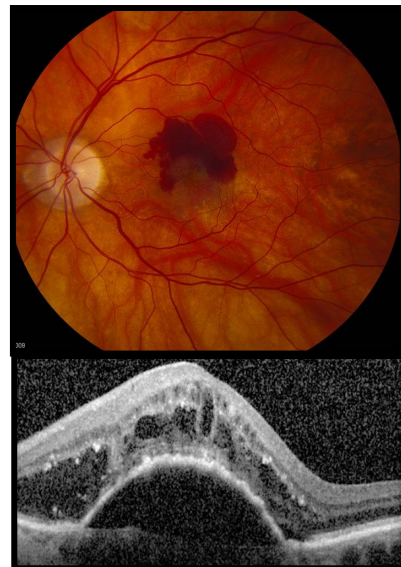
Seven-year RCH Research Coordinator, Meredith Berry, tied the knot with John in an outdoor ceremony.

Greater Houston Retina Research Foundation

RCH Doctors are Lead Authors for Prospective Trial Studying Wet AMD: *TREX-AMD*

In the USA, age-related macular degeneration (AMD) causes more blindness than all other eye diseases combined. AMD is a multifactorial and genetic disease whose prevalence increases with age, affecting about 25% by 80 years of life. By 2020, an estimated 3 million Americans will have AMD. Medications that block VEGF, a cytokine responsible for abnormal blood vessel leakage and growth in wet AMD, have proven remarkably effective at improving visual function for many patients. One key challenge with the currently available medications, however, is the need for ongoing treatment in many patients. RCH doctors led by Charles Wykoff MD created a prospective trial to compare less frequent dosing using a strict treat-and-extend protocol (TREX) with the gold-standard for optimal visual and anatomic outcomes, monthly dosing.

TREX-AMD 1-year results indicated that TREX and monthly treatment led to similar visual outcomes with a significantly reduced treatment burden for patients in the TREX arm. This indicates that patients can be safely treated less than monthly and still anticipate equivalent outcomes with less frequent doctor visits and treatments. Dr. Wykoff has presented outcomes data at major meetings in 2015 including the Macula Society and the American Academy of Ophthalmology. Year-1 results of the trial were recently published in the leading journal for eye diseases, *Ophthalmology*. See our website to access the manuscript. Total trial duration is 3 years with final trial completion planned for early 2017.



The Next Frontier of Retina Research at GHRRF

By David M. Brown, MD

Prior to 2005, a diagnosis of “wet” macular degeneration was essentially a sentence of blindness for the affected eye. The only patients who escaped this fate were those pioneers who participated in clinical trials at the Greater Houston Retina Research Center and other collaborating centers investigating a form of “targeted medicine” that specifically blocked VEGF. This revolutionary therapy became the standard of care worldwide for wet AMD and subsequent trials led to the approval of these drugs for the treatment of diabetic retinopathy and retinal vein occlusion. GHRRF played a major role in these trials and was the lead site worldwide for the pivotal trials ANCHOR/ MARINA (Lucentis for AMD), VIEW (Eylea for AMD), RISE/RIDE (Lucentis for DME), and VISTA (Eylea for DME).

Throughout this fourteen year period of prolific research, I was often asked by patients, “what about stem cells and gene therapy?” and I would reply, “It’s not yet ready for human trials”. That time has changed, and the GHRRF is excited to lead through the next frontier of retina research. Gene therapy is the use of modified viruses to deliver specific genes to targeted areas so that a patient’s own cells can produce either a protein that is defective or missing. In early October 2015, the first gene therapy for any human disease was approved by the FDA for a rare type of retinitis pigmentosa that blinds affected children. Further gene therapy trials at the GHRRF and other sites will investigate this technique for the treatment of other macular dystrophies, more common types of retinitis pigmentosa, and other causes of blindness. Gene therapy can also be used to transduce eyes to produce anti-VEGF treatment to potentially treat AMD or DME without ongoing injections. GHRRF investigators are helping to design these trials and to perfect the subretinal surgical techniques to deliver cells to the affected area. It is anticipated that we will begin recruiting patients for these trials in the United States in mid-2016. Stem-cell trials use the same subretinal surgical techniques to deliver cells to areas of damaged retina in an attempt to repair damage from dry macular degeneration. Currently a stem-cell trial using this approach for the treatment of dry macular degeneration is undergoing regulatory review and is anticipated to begin recruiting patients at GHRRF within the next few months. I am very encouraged about both of these approaches in the fight against blindness and am excited that the GHRRF is helping to pioneer the safe use of these techniques in human disease.



David M. Brown, MD

Research Team Spotlight: Eric Kegley

Eric Kegley is the director of Imaging for RCH where he has been contributing his knowledge and skills to our work for the past 23 years. He has extensive experience in the use of our state of the art imaging systems, playing a critical role in the detection of numerous retinal diseases. Conditions such as diabetic eye disease, retinal vein occlusion, and tumors can best be diagnosed with the help of an experienced photographer like Eric.

Eric credits his ability to take precise images of our patients' retinas to his extreme attention to detail. In addition, Eric has a strong interest in academics. He has served as a consultant to several imaging organizations and has played a critical role in the development of much of the modern ophthalmic photographic equipment in use today. He gives presentations yearly and serves as a teacher at the national Ophthalmic Photographer's Society (OPS) meeting. He is an appointed Adjunct Faculty Member at San Jacinto College and serves as a preceptor for its students. He has had three presentations at the Association for Research in Vision and Ophthalmology (ARVO), the largest vision research conference in North America, and has co-authored multiple articles on ophthalmic imaging.

Eric's hobbies include music, computers, and photography. When asked how he chose his career field, he responded, "I stumbled into it! But I am so lucky because I love my job so much." Eric has been married to his wife Jennifer, an RN who has also worked with RCH, for 25 years, and has two children. He lives by his favorite motto, "I live to serve."



Eric Kegley at the annual Ophthalmic Photographer's Society meeting

Awards and Recognition for RCH Physicians

Amy C. Scheffler MD

Elected into Macula Society & Club Vit
Elected to Faculty, Retina Fellows Forum 2016
Director, Retina Section, UT National Board Review Course
Fundraising Chair, Ron Michels Fellowship Foundation

Richard H. Fish MD

Advisory Board, Houston Methodist Hospital, Center for Performing Arts Medicine
Advisory Board, Houston Methodist Hospital, Blanton Eye Institute

David M. Brown MD

Elected into Macula & Retina Society
ASRS Board of Directors, 2014
ASRS Board Practice Management Chair 2014
Senior Achievement Award, AAO 2014

Tien P. Wong MD

Top Ophthalmologist 2015, Houstonia Magazine

Eric Chen MD

Elected into Retina Society
Top Ophthalmologist 2015, Houstonia Magazine

Matthew S. Benz MD

Elected into Retina Society
President of Houston Ophthalmology Society

Rosa Y. Kim MD

Elected into Retina Society & Club Vit

Ankoor R. Shah MD

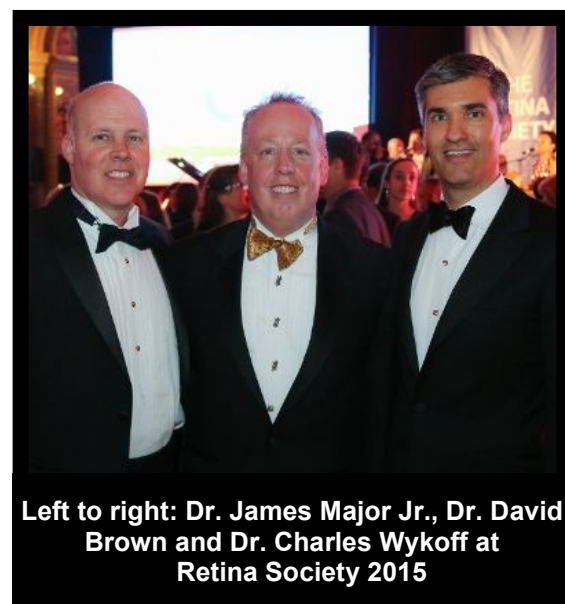
Vit-Buckle Society Video Finalist 2015

James C. Major Jr. MD

Elected into Retina Society
ASRS CME & Accreditation Committee Member
Director of ASRS website
Top Ophthalmologist 2015, Houstonia Magazine

Charles C. Wykoff MD

Elected into Macula & Retina Society
Achievement Award, AAO 2015
Academic Program Director, Vit-Buckle Society
Elected Deputy Chair, Dept of Ophthalmology, Houston Methodist Hospital



Left to right: Dr. James Major Jr., Dr. David Brown and Dr. Charles Wykoff at Retina Society 2015

Greater Houston Retina Research Foundation

GHRRF ANNUAL GIVING: THANK YOU TO OUR DONORS

"On behalf of the Greater Houston Retina Research Foundation, we would like to express our deepest gratitude to all of our donors for their continuing generosity and unwavering commitment to finding cures for blinding retinal diseases. We are extremely proud to serve the communities across Greater Houston."

TOP DONORS 2014-2015

-The Doctors and Staff of the GHRRF

**Michelle Adams
EP Aldridge
Ramon Ayala
Jerry Ball
William Bayer
AC Bourdier
Don Brown
Fred & Wanda Canaday**

**Henry Carswell
Richard Ferley
Rene R. Fernandez
Virginia Harwick
Don T. Huey
Kathy Hulfish
Andrea Kuperman
Joseph Levinton**

**Wallace & Lin Migura
Ann Miller
Catherine Morgan
John Murray
Joyce Pell
Nathan Reiner
Charlie Rosenbaum
Barbara Tseng**

Greater Houston Retina Research Foundation (GHRRF)

The Greater Houston Retina Research Foundation is a non-profit organization based in Houston devoted to the prevention of blindness through the advancement of research in vitreoretinal diseases. The GHRRF promotes collaborative and innovative research that demonstrates the potential for establishing effective new preventions, treatments and cures for many blinding retinal diseases. The GHRRF is funded through the generosity of interested individuals and tax deductible donations can be submitted to Greater Houston Retina Research Foundation at 6560 Fannin Street, Suite 750, Houston, TX 77030.

Email: deneva.zamora@houstonretina.com

Phone: 713-394-7520

RCH Preceptorship Program for Medical Students

The Retina Consultants of Houston's **Pre-medical Clinical Preceptorship** is targeted for motivated individuals who want to expand their involvement with clinical research. This is a 1 or 2 year position that we fill from a highly-competitive application pool.

"After graduating from Rice in 2012, I spent two years at RCH gaining research and clinical experience before entering medical school. I helped coordinate and conduct several clinical trials, write protocols and manuscripts, analyze data, and presented our results at regional and international conferences. During this time, I developed a particular interest in the field of retinal imaging and automated image processing. Working in combination with RCH and Optos, a leader in the field of retinal imaging, I developed software toolsets that facilitate optimal quantification of retinal disease pathology. I was invited to present this work at the Royal Society of Scotland, in Edinburgh.

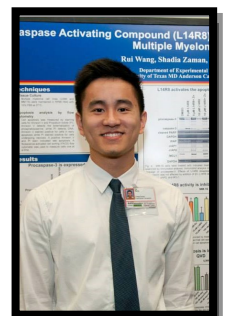


Currently, I am in my 2nd year of medical school at Baylor College of Medicine and continue conducting research with my mentors at RCH part-time. After my third year of medical school, I am going to enter into an MBA program. My experiences with RCH have helped lay a great foundation for my future medical private practice and continued scientific endeavors."

- Daniel E. Croft (started at BCM in July 2014)

"Joining the RCH team after graduating from Rice has allowed me to gain invaluable clinical and research experiences. Through conducting patient work-ups and working alongside the MDs, I learned how to effectively communicate with patients while honing my clinical skills. Additionally, being immersed in the many clinical trials run by at RCH and the GHRRF has provided me with opportunities to contribute whether it was maintaining databases, preparing manuscripts or conducting statistical analyses. I love being able to contribute to the various projects and seeing many to completion. The dedication of the physicians to their field is truly evident and will challenge me as I prepare for medical school and beyond."

- Rui Wang, (Active RCH & GHRRF Recipient)



Greater Houston Retina Research Foundation

2015 Publications by RCH Physicians

RETINA

Canadian Journal of Ophthalmology

British Journal of Ophthalmology

Ophthalmic Surgeries Lasers & Imaging

American Journal of Ophthalmology

Ophthalmology

Retinal Physician

Sports Medicine

Retina Today

JAMA Ophthalmology

Retinal Cases and Brief Reports

Wykoff CC, Brown DM, Croft DE, Major JC Jr, Wong TP. Progressive retinal nonperfusion in ischemic CRVO.

Major JC Jr, Wykoff CC, Croft DE, Wang R, Mariani AF, Lehmann AE, Brown DM. Aflibercept for pigment epithelial detachment for previously treated neovascular AMD.

Wykoff CC, Schwartz SG, Adelman RA, Brucker AJ, Fynn HW Jr. Primary rhegmatogenous retinal detachment repair: evidence supports an individualized approach.

Rayess N, Rahimy E, Shah CP, Wolfe JD **Chen E**, et al. Incidence and clinical features of post-injection endophthalmitis according to diagnosis.

Wykoff CC, Hariprasad SM. Comparing Aflibercept, bevacizumab, and ranibizumab for DME: analysis of DRCR Protocol T.

Rao P, Abbey AM, Yonekawa Y, **Shah AR**, et al. Hemangioma Associated with Peripheral Vascular Nonperfusion.

Silva RA, Sridhar J, Miller D, **Wykoff CC**, et al. Exogenous fungal endophthalmitis: an analysis of isolates and susceptibilities to anti fungal agents over a 20-year period (1990-2010).

Wykoff CC, Croft DE, Brown DM, et al.; TREX-AMD Study Group. Prospective Trial of Treat-and Extend versus Monthly Dosing for Neovascular AMD: TREX-AMD 1-Year Results.

Croft DE, **Wykoff CC**, van Hemert J, Verhoek M, **Brown DM**. Not All Retina Is Created Equal: Metabolic Quantification of Ultra-Widefield Images.

Campochiaro PA, **Wykoff CC**, et al. Monthly versus as-needed ranibizumab injections in patients with retinal vein occlusion: the SHORE study.

Boyer DS, Nguyen QD, **Brown DM**, Basu K, Ehrlich JS; RIDE and RISE Research Group. Outcomes with PRN Ranibizumab after Initial Monthly Therapy: Long-Term Outcomes of the Phase III RIDE and RISE Trials.

Brown DM, et al. Intravitreal Aflibercept for DME: 100-Week Results From the VISTA and VIVID Studies.

Campochiaro PA, Clark WL, Boyer DS, Heier JS, **Brown DM**, et al. Intravitreal Aflibercept for macular edema following branch retinal vein occlusion: the 24-week results of the VIBRANT study.

Scheffler AC, Mruthyunjaya P. Fine needle Aspiration Biopsy for Uveal Melanoma. Part 1: Technique & Complications.

Scheffler AC, Mruthyunjaya P. Fine needle Aspiration Biopsy for Uveal Melanoma. Part 2: Genetic Testing Techniques and Controversies.

Shah AR, et al. Updates on Stage 3 Meaningful Use for EHR.

Bedgood A, Rand SE, **Major JC Jr.** Occult Retinal Detachment After Mild Traumatic Brain Injury.

Capone A Jr, **Shah AR**, et al. Widefield Imaging in Pediatric Retinal Disease.

Scheffler AC. Review of Radiation Retinopathy: Modern Treatments and Outcomes.

Heier JS, Bressler NM, **Brown DM** et al. Comparison of Aflibercept, Bevacizumab, and Ranibizumab for Treatment of Diabetic Macular Edema: Extrapolation of Data to Clinical Practice.

Rao P, **Shah AR**, et al. Bilateral Acute Endophthalmitis Associated with Munchausen Syndrome.

Grants Awarded To RCH Physicians for Research

GHRRF leads the fight against blindness by designing and performing innovative clinical trials aimed at improving treatments for retinal diseases. These trials give our patients access to cutting-edge treatments not otherwise available to patients. Each of these grants was written by an RCH physician and was awarded through a competitive funding process to support all associated patient care.

Grants Awarded to Charles C. Wykoff MD PhD of RCH and the GHRRF:

- **TREX AMD Trial:** Treat and Extend Treatment with Ranibizumab vs Monthly Ranibizumab in Neovascular AMD. *Grant to fund management of 60 patients.*
- **Endurance 1 Trial** Treat and Extend Treatment with Aflibercept in DME. *Grant to fund management of 59 patients.*

Grants Awarded to David M. Brown MD of RCH and the GHRRF:

- **TREX DME Trial:** Treat and Extend Treatment with Ranibizumab vs Monthly Ranibizumab in Diabetic Macular Edema. *Grant to fund management of 60 patients.*
- **DAVE Trial :** Widefield Angiography Guided Targeted-Retinal Photocoagulation Combined with Ranibizumab for DME. *Grant to fund management of 40 patients.*

Grant Awarded to Amy C. Scheffler MD of RCH and the GHRRF:

- **RRR Trial Extension:** Ranibizumab for Radiation Retinopathy. *Grant to fund management of 40 patients.*

Selected National & International Presentations Delivered by RCH Physicians

- ♦ Brown DM. VISTA Topline Presentation; Anti-VEFG DARPIn (abicipar pegol) in Neovascular AMD. Angiogenesis Meeting. 2015.
- ♦ Brown DM. Which Drug and why: anti-VEGF agents for Neovascular AMD. Atlantic Coast Retina Club. 2015.
- ♦ Brown DM. Understanding RVO. Utah Ophthalmology Society Annual Scientific Meeting. 2015.
- ♦ Brown DM. Protocol T and its Clinical Implications in Daily Clinical Practice; My approach in patients with DME. 2015.
- ♦ Brown DM. Intravitreal Aflibercept for DME: 148-Week results from the VISTA trial. ASRS Annual Meeting. 2015.
- ♦ Brown DM. IAI for DME: 148-Week Results from CISTA and VIVID. Retina Society. 2015.
- ♦ Brown DM. Intravitreal Aflibercept for Macular Edema Due to Branch Retinal Vein Occlusion; Vibrant RVO Presentation. APAO. 2015.
- ♦ Brown DM. Intravitreal Aflibercept for DR in Patients With DME. Macula Society. 2015.
- ♦ Brown DM. What the anti-VEGF trials teach us about the pathophysiology of RVO. Wills Eye Retina & Oncology Symposium. 2015.
- ♦ Major Jr. JC. Age-Related Macular Degeneration 2015 - What's Hot!? ASORN Annual Meeting. 2015.
- ♦ Major Jr. JC. Effect of Central Retinal Thickness on Visual Outcomes in DME: The VIVID-DME and VISTA-DME Trials. PAAO. 2015.
- ♦ Major Jr. JC. Pregnancy and Retinal Detachments. Vit-Buckle Society Annual Meeting. 2015.
- ♦ Major Jr. JC. Thioridazine Toxicity. Third Coast Retina. 2015.
- ♦ Scheffler AC. Invited Retina Section Director and Speaker. University of Texas National Resident Board Review Course. 2015.
- ♦ Scheffler AC. Invited Guest Speaker and Panelist. Orbital Oncology Course. MD Anderson Cancer Center. 2015.
- ♦ Scheffler AC. Invited Guest Speaker. Update on Eye Tumors and Uveal Melanoma. International Course in Ophthalmology. 2015.
- ♦ Scheffler AC. Invited Case Presentation. Wills Eye Institute Intraocular Tumor Symposium. 2015.
- ♦ Scheffler AC. Invited Retina Section Director and Speaker. University of Texas National Resident Board Review Course. 2015.
- ♦ Scheffler AC. Invited Guest Speaker and Panelist. Orbital Oncology Course. MD Anderson Cancer Center. 2015.
- ♦ Shah AR. Chorioretinal Colobomas: a 20 Year Review. 2015.
- ♦ Shah AR. Widefield Fluorescein Angiography in Children and Adults. 2015.
- ♦ Shah AR. Efficacy of Intravitreal Dexamethasone Implant in Vitrectomized Eyes With DME Recalcitrant to Anti-VEGF Therapy. 2015.
- ♦ Shah AR. Widefield Fluorescein Angiography in Patients without Peripheral Disease: A Study of Normal Peripheral Findings. 2015.
- ♦ Shah AR. Prevalence and Surgical Outcomes of Macular Holes in Eyes with Age-Related Macular Degeneration. 2015.
- ♦ Wong TP. Management of Macular Hole. Vit Buckle Society Annual Meeting. 2014.
- ♦ Wykoff CC. Diabetic Retinopathy Progression in Patients Treated with Fluocinolone. AAO. 2015.
- ♦ Wykoff CC. 1-Year Trial Outcomes in Wet AMD: *TREX-AMD*. AAO. 2015.
- ♦ Wykoff CC. Diabetic Retinopathy Improvements with Ranibizumab. Retina Society. 2015.
- ♦ Wykoff CC. Management of Exogenous Endophthalmitis. International Ocular Inflammation Society. 2015.
- ♦ Wykoff CC. Intravitreal Aflibercept for DME in Rescued Laser Patients. ASRS. 2015.
- ♦ Wykoff CC. Diabetes and Blood Pressure Control on Outcomes in DME Patients. The American Diabetic Association (ADA). 2015.
- ♦ Wykoff CC. 12-Month Trial Outcomes in Wet AMD: *TREX-AMD*. ARVO. 2015.

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