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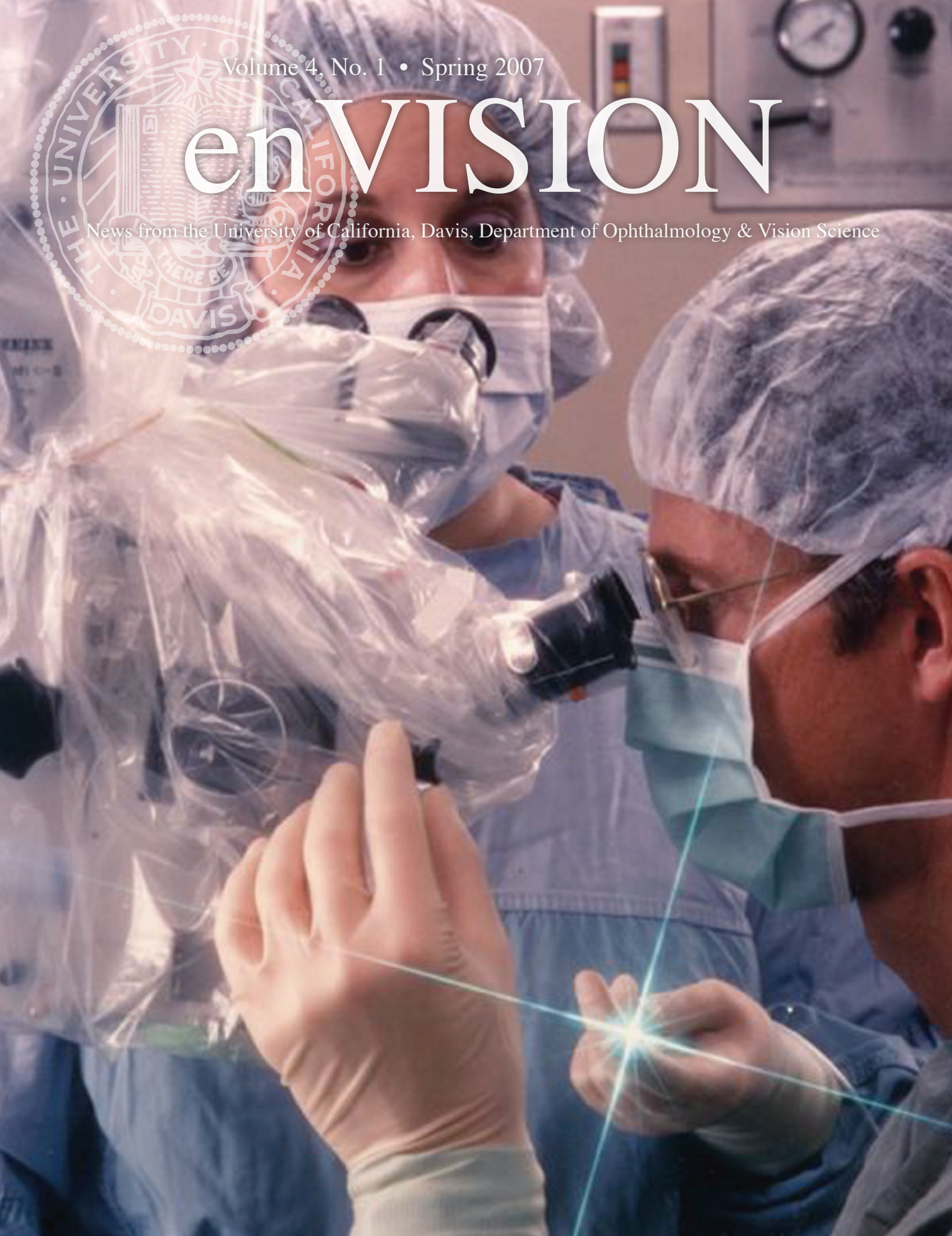
enVISION

News from the University of California, Davis, Department of Ophthalmology & Vision Science



From the Chair's Desk

by Mark J. Mannis, M.D.

Next year the Department of Ophthalmology & Vision Science at UC Davis (UCD) will enter its 40th year. Our training program, established in 1968, was the first residency program at UC Davis to be accredited, and over the years, we have experienced transforming growth. Our patient population has more than doubled in the last seven years, and we are now recognized as a major referral center in the Western United States. We have built an internationally recognized faculty, and we are fast establishing a unique research program that, with over 40 vision scientists across the Davis Campus, is already among the top 20 National Eye Institute (NEI) funded vision research efforts in the United States.

It is appropriate in this issue that we profile the first graduate of our program, Neil Kelly, M.D., in his own right, an accomplished innovator in macular hole surgery and pneumatic retinopexy. Over these four decades, our faculty has endeavored to produce graduates who contribute to our field in many ways—as busy clinicians, talented medical administrators, teachers, and investigators. Along with our faculty, the graduates of our residency and fellowship training programs will forge the lasting legacy of ophthalmology at UC Davis, both in the sphere of clinical practice as well as academe. Their accomplishments have and continue to write the history of this department.

In considering the legacy of our department, however, our most lasting accomplishment is, perhaps, the vision restored for thousands of patients through state-of-the-art medical and surgical interventions available at UCD. Our patients represent our proudest moments, while the physicians and scientists we train are our gift back to them and their children.

And so, as we reflect on the last four decades and prepare to open a new era of accomplishment in 2008—our 40th year—we celebrate our accomplishments while steadying our focus on the tasks ahead of us in the decades to come.

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UC DAVIS
HEALTH SYSTEM

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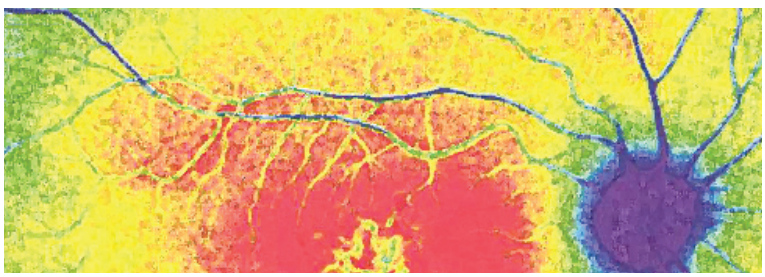

Neil Kelly, M.D.

The First Graduate of UC Davis Department of Ophthalmology & Vision Science

The measure of success of a training program is the quality of its product. As UC Davis Department of Ophthalmology & Vision Science approaches its 40th Anniversary next year, we open our Alumni Section with a tribute to our first graduating resident, Neil Kelly, M.D. Now retired after a very productive career in ophthalmology, Neil's accomplishments are a tribute to UC Davis.

Neil completed his undergraduate work at the University of Detroit and Wayne State University and went on from there to Wayne State University School of Medicine. Upon completion of his medical school training, he migrated westward to do a rotating internship at LA County Hospital, after which he was drafted to serve in Viet Nam. His return from active duty assigned him to Mather Air Force Base in Sacramento, and for a short period, he worked for Student Health at California State University, Sacramento.

But ophthalmology as a specialty had been in the back of Dr. Kelly's thoughts for some time. He had done an intriguing eye rotation during his internship, and as a flight surgeon during the war, he saw and took care of many eye injuries. When UC Davis established its residency training program in 1968, the always adventurous Kelly decided to become the first resident in the program. At that time, with Byron Demorest, M.D. as department chief, all faculty members were volunteers, and residents from UC San Francisco rotated out to the county hospital in Sacramento to augment their training. Members of the community then involved in the training program included: Norman Schwilk, Jack Cowley, Robert Peabody, Phillip Levy, and the late William Kohl, among others. The primary didactic training was a trip to the Lancaster Course at Colby College in Maine. For a year, Neil was the only resident. He was then joined by Jerry Gilbert as the second member of the house staff. The first full-time chair of the department, Jerry Portney, came only nine months before Kelly finished his residency in the summer of 1972.

After completing the program, Kelly decided to take over a general ophthalmology practice in Redding, CA, about three hours north of Sacramento. With what he describes as "on the job training," he began his retina practice there. He decided that fellowship training was a necessity, and from 1974 through 1975, he joined Alice McPherson, M.D. at Baylor University and completed his fellowship training. When he returned to Sacramento after fellowship, he elected to go into private practice.

It was at this time that Dr. Kelly began novel work with two new techniques, until then not practiced. Both of these

procedures—pneumatic retinopexy and macular hole surgery—are now standard tools in the vitreoretinal surgical repertoire. Kelly presented his early results which he called "Office repair of retinal detachment" at the International Congress of Ophthalmology in Rome in 1984. Later, along with George Hilton, who called the procedure pneumatic retinopexy, they published the results of a collaborative report of the first 100 cases in the Archives of Ophthalmology in 1987. About that same time, Kelly was the first in the world to perform macular hole surgery. His early results were reported at the Academy in 1989, and in the Archives of Ophthalmology in 1991.

In order to spend more time with his family and to enjoy sailing as a pastime, in November 2003, Kelly decided to retire from the Sacramento Retina Consultants, which he had founded. In December 2003, he purchased a catamaran motor yacht and with minimum experience on the water, sailed out of Annapolis, Maryland, to begin his consuming pastime of plying the seas. Since then, he and his family have sailed two winters to Mexico as well as trips to Canada, Alaska, and of course, destinations in Southern California where his boat is moored, including San Diego and Catalina.

Neil's two children, Brett and Nicole, have provided him with five granddaughters with whom he spends much of his time, both off and on his boat. His wife, MJ, continues to busy herself with flower arranging and toastmasters and has become an experienced crew member for her husband/captain.

Kelly remembers with fondness the embryonic residency program that he joined, marveling at its growth and transformation into one of the finest residency training programs in the country. "The program has developed remarkably well, and Davis is clearly now a great training institution." He points out that "no one in the late 60s had the vision that both Sacramento and the Medical Center would grow into the major metropolis and health system they have become."

Although essentially a full-time sea captain, husband, and grandfather now, Neil maintains his CME credits, attends meetings and enjoys the camaraderie of his friends in ophthalmology. His prolific clinical career and his notable contributions to ophthalmic surgery have provided him with the satisfaction of having helped many thousands of people with retinal and macular disease. He looks forward to the new developments in medical and surgical technology that are now on the horizon. And speaking of horizons, he will soon set sail again for a new adventure.

UC Davis is proud of Neil Kelly and his accomplishments.

Neil at the helm of his boat.

UC Davis Eye Team

OPHTHALMOLOGISTS

Mark J. Mannis, M.D., F.A.C.S. Professor and Chair. Cornea, External Disease/ Refractive Surgery. Since joining the Department in 1980, Dr. Mannis has specialized in cornea and external eye diseases and refractive surgery. His research focuses on the effect of diseases of the eye and skin, developing new automicrobial agents and corneal wound healing. He has authored six books and over 100 journal publications. He received his M.D. degree from the University of Florida, completed his residency in Ophthalmology at Washington University in St. Louis School of Medicine, and was a fellow in cornea and external disease at the University of Iowa.

Duva J. Appleman, M.D. Assistant Professor,Veterans Administration, Mather. Glaucoma. Dr. Appleman specializes in glaucoma surgery and sees patients at the Veterans Administration Hospital-Mather Field. She holds an M.D. degree from the University of Wisconsin, completed her residency also at the University of Wisconsin, was a research fellow at the Massachusetts Eye and Ear Infirmary, and then completed her glaucoma fellowhip at Devers Eye Institute in Portland, Oregon. Dr. Appleman joined the faculty in 2001 and teaches residents and medical students.

James D. Brandt, M.D. Professor. Glaucoma. Dr. Brandt heads the Department's Glaucoma Service. His research spans basic and clinical sciences, including the $30 million Ocular Hypertension Treatment Study. He received his M.D. degree from Harvard University and pursued a post-doctoral fellowship in glaucoma research also at Harvard. He completed his ophthalmology residency at the University of Southern California and a clinical glaucoma fellowship at Wills Eye Hospital before joining the UC Davis faculty in 1989. Dr. Brandt has authored over fifty articles and chapters since joining the Department and holds four U.S. patents in the area of glaucoma treatment.

Jeffrey J. Caspar, M.D. Associate Clinical Professor. Comprehensive Ophthalmology and Refractive Surgery. Program Director. Dr. Caspar joined the Department in 1998 after completing both his M.D. degree and Ophthalmology residency at UC Davis. He specializes in comprehensive ophthalmology as well as cataract and refractive surgery. He is involved in studies of refractive patients and in a variety of clinical trials and has published three journal articles and book reviews since joining the Department. Dr. Caspar serves as Director of Residency Education.

Vahid Feiz, M.D. Assistant Professor. Cornea, External Disease/Refractive Surgery. Dr. Feiz specializes in cornea and external disease as well as refractive surgery. Since joining the Department in 2004, Dr. Feiz has published both original papers as well as book chapters, and his primary research interests are in the areas of the intraocular lens and the effects of refractive surgery. His M.D. degree was granted by Washington University in St. Louis. He completed his ophthalmology residency at Boston University School of Medicine and a fellowship in cornea, external disease and refractive surgery at UC Davis.

Francisco J. Garcia-Ferrer, M.D. Associate Physician Diplomate. Veterans Administration, Mather. Glaucoma, Cornea, External Disease/Refractive Surgery. Dr. Garcia-Ferrer specializes in refractive surgery and holds an appointment as Director of Ophthalmology at the Veterans Administration Hospital—Mather Field. He holds an M.D. degree from Washington University in St. Louis, completed his residency at Barnes Jewish Hospital in St. Louis, and was a cornea and refractive surgery fellow at UC Davis.

John L. Keltner, M.D. Professor. Neuro-Ophthalmology. Research Director. Formerly chairman of the Department for over 25 years, Dr. Keltner received his M.D. degree from Case Western Reserve University and served his ophthalmology residency at Washington University in St. Louis School of Medicine. His professional specialty is neuro-ophthalmology, and his research interests include auto-immune retinopathy, cancer-associated retinopathy and automated visual fields. Since joining the Department in 1976, Dr. Keltner has published 316 journal articles.

Esther S. Kim, M.D. Associate Clinical Professor. Comprehensive Ophthalmology. A member of the faculty since 1995, Dr. Kim completed her M.D. degree and ophthalmology residency at UC Davis. Specializing in comprehensive ophthalmology and cataract surgery, her research includes clinical trials as well as injection studies for macular degeneration and glaucoma.

Assistant Professor. Glaucoma. Medical Director. Dr. Lim joined the Department in 2000 after receiving her M.D. degree and completing her residency at UCLA. Her specialty and her research are in the field of glaucoma, and she completed a glaucoma fellowship at the Bascom Palmer Eye Institute, University of Miami. Since arriving at UC Davis, Dr. Lim has authored 22 journal publications, two book reviews and two book chapters. Her research interests include patient adherence to glaucoma medications and optic nerve imaging. As a member of the UC Davis Health System's Electronic Medical Record Task Force, Dr. Lim is working to bring information technology to the forefront. Dr. Lim serves as Medical Director for the department.

UC Davis Eye Team

OPHTHALMOLOGISTS

Linda J. Margulies, M.D. Health Sciences Clinical Professor. Vitreoretinal Disease. Veterans Administration, Martinez. Dr. Margulies holds an M.D. degree from George Washington University and completed her ophthalmology residency at UC Davis. She completed a fellowship in vitreo-retinal disease at Washington University in St. Louis. She has been associated with UC Davis as a faculty member since 1988 and works extensively with ophthalmology residents at the Veterans Administration Hospital in Martinez, California, where she is Director of the Ophthalmology Program.

Lawrence S. Morse, M.D., Ph.D. Professor. Retina/Vitreous/Uveitis. Dr. Morse joined the Department in 1989 and is Director of the Vitreo-Retinal Service and holds an M.D. degree from UCLA and a Ph.D. from the University of Chicago. He completed his residency in ophthalmology at the Jules Stein Eye Institute at UCLA and his retina fellowship at Duke University. He specializes in vitreo-retinal disease and surgery. His research studies focus on the role of lipids in macular degeneration. He recently received a Helen Keller Research Foundation Award for research in age-related macular degeneration. He has authored over 80 journal articles and three book chapters.

Mary A. O'Hara, M.D., F.A.C.S., F.C.A.P. Professor. Pediatric Ophthalmology/ Strabismus. Dr. O'Hara specializes in pediatric ophthalmology and strabismus and is leading the Department's efforts to establish a center for congenital eye disease at UC Davis. She joined the Department in 2004 as Director of Pediatric Ophthalmology, and her clinical research interests include amblyopia and motility disorders. She holds an M.D. degree from the F. Edward Hebert School of Medicine, Uniformed Services University of the Health Sciences, Bethesda, Maryland, and completed her ophthalmology residency at Brooke Army Medical Center and a pediatric ophthalmology and strabismus fellowship at Wills Eye Hospital, Philadelphia, Pennsylvania. She is former president of the Joint Commission on Allied Health Personnel in Ophthalmology. Dr. O'Hara has authored numerous papers and book chapters.

Susanna S. Park, M.D., Ph.D. Associate Professor. Retina/Vitreous . Dr. Park holds both M.D. and Ph.D. degrees from the Yale University School of Medicine and completed her residency and a fellowship at the Massachusetts Eye & Ear Infirmary at Harvard University. She joined the Department's faculty in 2005 and specializes in vitreo-retinal diseases and surgery. Her research interests include diabetic retinopathy and macular disorders, posterior uveitis and endophthalmitis, ocular tumors and ocular pharmacology. She has authored 23 papers and nine review articles and book chapters.

OPHTHALMOLOGISTS

Mark I. Rosenblatt, M.D., Ph.D. Assistant Professor. Cornea, External Disease/Refractive Surgery. Dr. Rosenblatt specializes in cornea and external eye diseases, and his research interests include studying what keeps the cornea clear, the effects of injury on the eye and corneal wound healing. Dr. Rosenblatt holds M.D. and Ph.D. degrees from the University of Miami School of Medicine and completed both his residency and a fellowship at the Massachusetts Eye and Ear Infirmary, Harvard University. He joined the Department in 2005.

Alan M. Roth, M.D. Professor Emeritus. Ophthalmic Pathology. Dr. Roth is active in pathology research and his particular interests include the development of retinal disease in premature infants and cancer-associated blindness. He holds an M.D. degree from the State University of New York at Stony Brook School of Medicine, and he has been a member of the Department since 1972.

Ivan R. Schwab, M.D. Professor. Cornea, External Disease/Uveitis and Director, Cornea Service. Dr. Schwab specializes in diseases of the cornea and external eye as well as uveitis. He joined the Department in 1989, and since that time he has authored 120 articles, 3 books, 12 book reviews and 19 book chapters. His research interests include cell growth techniques and stem cell growth issues. He is a dedicated collaborator and is currently working with three Australian research institutions. Dr. Schwab holds an M.D. degree from the West Virginia University School of Medicine and completed his residency and a fellowship at the Pacific Medical Center, San Francisco.

David G. Telander, M.D. Ph.D. Assistant Professor. Retina/Vitreous. Dr. Telander holds M.D. and Ph.D. degrees from the University of Minnesota, where he completed his residency, and he also completed his fellowship at the Jules Stein Institute at UCLA. He specializes in vitreo-retinal diseases and surgery, and his research focuses on epithelial membrane studies in the hope of preventing scarring through stem cell therapies. Dr. Telander has been a faculty member since 2005 and has five articles in submission or preparation.

OPTOMETRISTS

Thomas B. Barnes, O.D., M.S. Senior Optometrist. Dr. Barnes earned his O.D. degree from the UC Berkeley School of Medicine and joined the Department in 1999. His research interests focus on visual optics.

UC Davis Eye Team

OPTOMETRISTS

Brooke S. Chang, O.D. Senior Optometrist. Dr. Chang received her O.D. degree from the UC Berkeley School of Optometry and joined the Department in 2005.

Crista M. Corbett, O.D., F.A.A.O. Senior Optometrist. Dr. Corbett received her O.D. degree from the State University of New York College of Optometry and completed her residency at the Northeastern College of Optometry. She joined the Department in 2006.

Melissa Barnett Erickson, O.D. Senior Optometrist. Dr. Barnett Erickson earned her O.D. degree from the UC Berkeley School of Optometry and joined the Department in 2005. She is the current president of the Sacramento Valley Optometric Society.

Marcia Y. Nearing, O.D. Senior Optometrist. Dr. Nearing received her O.D. degree from The New England College of Optometry and completed her residency at the Veteran's Administration Boston Medical Center. She joined the Department in 2003.

Myhanh T. Nguyen, O.D., M.S. Senior Optometrist. Dr. Nguyen earned her O.D. degree at the Ohio State Univ. College of Optometry, completed her residency at Chillecothe Veterans Administration Medical Center, and joined the Department in 2003.

OPTOMETRISTS

Kaaryn Pederson-Vanbuskirk, O.D. Senior Optometrist. Dr. Pederson-Vanbuskirk received her O.D. degree from the UC Berkeley School of Medicine and completed her residency in cornea and contact lenses at UC Berkeley. She is a Diplomate of the Cornea & Contact Lenses Section, and a fellow of the American Academy of Optometry. She has been a member of the Department since 1999.

VISION SCIENTISTS

Leo M. Chalupa, Ph.D. Professor and Chair, Visual Developmental Neurobiology. Professor Chalupa has been a Department faculty member since 2000 and holds a joint appointment with Neurobiology and Physiology. He received his Ph.D. from the City University of New York, and he has been an internationally recognized researcher in the development and plasticity of the mammalian visual system as well as the structural properties of retinal ganglion cells.

Stacie S. Choi, Ph.D. Assistant Adjunct Professor. High Resolution Retinal Imaging. Professor Choi joined the Department in 2004 as a post-doctoral researcher in psychophysics and vision science. Her doctoral degree is from the University of Auckland, New Zealand, and she specializes in high resolution retinal imaging.

Leonard M. Hjelmeland, Ph.D. Professor. Biochemistry. Professor Hjelmeland received his Ph.D. from Stanford University. His research focuses on studies to identify genes that regulate photoreceptors. Since joining the department in 1990, Professor Hjelmeland has authored 72 journal publications and edited one book.

Charles E. Thirkill, Ph.D. Associate Adjunct Professor. Ocular Immunology. Since joining the Department in 1984, Professor Thirkill has published 37 journal articles on topics in ocular immunology. He works closely with Dr. Keltner on auto-immune retinopathy and cancer-associated retinopathy. He holds a Ph.D. degree from the University of Oklahoma in microbiology.

UC Davis Eye Team

VISION SCIENTISTS

John S. Werner, Ph.D. Professor. Visual Psychophysics. Professor Werner's research focuses on visual psychophysics, the structure and the function of the visual system. Since joining the Department in 2000, he has established the Vision Science and Advanced Retinal Imaging laboratory while authoring 44 published papers and 12 book chapters, including one in preparation. He is co-author of the two-volume text book "The Visual Neurosciences." He holds a Ph.D. degree from Brown University and did post-doctoral studies in physiological optics at the Institute for Perception, Soesterberg, The Netherlands. Dr. Werner's lab is working on high resolution real-time imaging of the retina in health, aging and disease.

Robert J. Zawadski, Ph.D. Visiting Assistant Professor/Research Scholar. High Resolution Retinal Imaging. Professor Zawadski joined the Department in 2004 as a principal collaborator on Dr. Werner's visual system research. He holds a Ph.D. degree from the University of Vienna, Austria. He is currently working on instrumentation for high resolution retinal imaging.

VOLUNTEER CLINICAL FACULTY

Barbara J. Arnold, M.D.
Colin B. Arnold, M.D.
Kevin A. Beadles, M.D.
Craig E. Berris, M.D.
John Canzano, M.D.
Ronald J. Cole, M.D.
Byron H. Demorest, M.D.
Daniel M. King, M.D.
Philip L. Levy, M.D.
Robert B. Miller, M.D.
Robert E. Nasser, M.D.
Jonathan P. Perlman, M.D.
James B. Ruben, M.D.
Denise Satterfield, M.D.
Mithlesh C. Sharma, M.D.
Ernest F. Tark, M.D.
John T. Tong, M.D.
Bruce A. Winters, M.D.
John H. Zeiter, M.D

Dan King, M.D.: UC Davis Volunteer

Clinical Faculty Ophthalmologist and Spelunker

Dan King's life is very full. As he balances a solo practitioner comprehensive ophthalmology practice in Red Bluff, California, with his passions for photography, golf and all kinds of activities in our national parks, he still makes time to instruct ophthalmology residents at UC Davis. As a member of the Department's volunteer clinical faculty, he has been doing so since 1992.

So what is it about the experience at the UC Davis Department of Ophthalmology & Vision Science that keeps Dr. King engaged and committed as a practitioner, a teacher and a donor? Of his frequent visits to the Department, Dr. King says, "I feel like I usually take more away than I give. There is so much to be learned. Sometimes I feel like I'm cheating because I learn so much when I am here."

Dr. King is particularly emphatic when he speaks of his admiration for his faculty colleagues at UC Davis. "This is the place I send patients… for more complicated problems. I've really enjoyed the availability of such talented and accessible people to see my patients in consultation." And he has been sending patients to UC Davis for almost twenty-five years.

Although Dan King considers himself originally from the Midwest (Kansas, specifically), he grew up, as he says, "an Air Force brat" and lived in many places. A graduate of the University of Kansas Medical School, Dr. King spent two years practicing medicine at Beale Air Force Base north of Sacramento before returning to the University of Kansas to complete his residency in ophthalmology. And two years was enough time to convince him that California was where he wanted to live and practice ophthalmology. An opportunity arose for him to buy an established practice, and for twenty-five years, he has thrived in Red Bluff while being deeply involved in that community. Not only has he served as President of the local medical society and Chief of Staff at the Tehama County Hospital, but he has been a member of the Tehama County School Board.

Where does Dr. King think the field of ophthalmology and the UC Davis department are headed in the coming years? He expects there to be more emphasis on research at UC Davis that depends on financial support from the community. He also expects UC Davis to continue to define the standard of clinical ophthalmic care in the Northern California region. However, he says that "Solo practice is becoming a thing of the past. The profession is complex, and the public needs to under-

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Children are Not Small Adults

L.R. Mary O'Hara, M.D. and Carlissa Reyes.

by Mary A. O'Hara, M.D.

The child's eye is a dynamic organ. In the first three years of life, it nearly doubles in size. The proportions of various parts of the eye also change during this time. The neurological connections between the eye and the brain are immature at birth and continue to develop over the first decade of life. Any disruption in vision during this critical period can damage the development of the vision centers in the brain, causing amblyopia. These unique aspects of the child's eye present challenges in the practice of pediatric ophthalmology.

Children are prone to many of the same eye diseases that we encounter in adulthood, but with a twist. Cataracts, glaucoma and corneal disease, although uncommon, do occur in children. Each of these conditions is doubly damaging in the child. Not only does the disease process harm the eye, it also halts normal development of the vision centers of the brain. The child then requires treatment not only for the eye disease, but for the amblyopia that develops secondary to the disease. The early detection and treatment of these diseases in children is, therefore, critical.

The treatment of all of these conditions has benefited from advances made in the practice of general ophthal-

mology. Childhood cataracts are now routinely rehabilitated with lens implants. Advances in glaucoma medication and surgery have salvaged the vision of many afflicted children. Corneal transplants in babies and older children have restored vision potential where, in past years, there was none.

Strabismus (misalignment of the two eyes in relation to each other) is a more common eye disease in children. Over 4% of American children have some form of strabismus. Although the medical and surgical techniques for treating strabismus have changed little, their application in the treatment of strabismus conditions has changed a great deal in recent years. We are also beginning to recognize the importance of the psychosocial aspects of strabismus, both in children and adults. Earlier and more aggressive surgery is now more common.

Strabismus also occurs in adults. The negative effects of strabismus on the development of interpersonal relationships, job acquisition and progression are now well-established. Many times, it is the pediatric ophthalmologist who treats the adult strabismus patient.

At the University of California, Davis, the pediatric ophthalmology and strabismus department has undergone great expansion in the past two years. The tremendous growth in the department reflects corresponsing growth in the community. Young families are moving to the Sacramento area, increasing the need for pediatric ophthalmology services. Children with complex medical conditions throughout the region also require the multidisciplinary services available at the University of California, Davis.

The Department of Ophthalmology & Vision Science has recently been designated a clinical site for the Pediatric Eye Disease Investigators Group (PEDIG). PEDIG is a collaborative network of over sixty clinical sites throughout the United States, performing clinical research sponsored by the National Eye Institute. Several recent PEDIG studies have changed national practice patterns in the treatment of amblyopia and certain forms of strabismus. We are excited about this collaboration and the research opportunities it affords.

In addition, a Center for Children's Sight is being developed within the Department of Ophthalmology & Vision Science. There is great need for the collaboration of a multi-disciplinary team of sub specialists in the treatment of complex eye diseases in children. It is the aim of this Center to provide effective, efficient, and compassionate care to our young patients with complex eye disease.

L.R. Mary O'Hara, M.D. and Rebekah Hite.

Helping Children See

by Maedi Bartolacci BSc., OC(C), COMT

The orthoptist plays an important role as part of the eye-care team. As a liaison between the ophthalmologist and the family, the orthoptist is responsible for the non-surgical treatment of a variety of ocular motility disorders as well as vision development in amblyopic patients. As a team, the orthoptist and ophthalmologist work together to design a treatment plan specific to the patient.

In pediatric ophthalmology, the orthoptist maintains close follow-up with amblyopic patients. Amblyopia, a disorder characterized as a reduction in vision in one or both eyes as a result of abnormal binocular interaction during visual development, affects 2% to 5% of children. Abnormal interaction between the eyes and the brain can be caused by a difference in refractive error, an eye misalignment, or anything that prevents a clear image from arriving at the retina with subsequent transmission to the visual cortex. It is a serious problem as these children walk around essentially one-eyed with very little vision in the fellow eye.

The orthoptist monitors vision development closely in amblyopic children, as frequent follow-up appointments are mandatory. Patients undergoing any type of amblyopia therapy require encouragement and support for this essential and sometimes trying method of vision development.

Maedi Bartolacci and friends.

Traditions Shape the Heart and Spirit of a Department:

Employees of the Year 2006

Over the past 39 years, the Department of Ophthalmology & Vision Science at UC Davis has developed many traditions that have shaped the heart and spirit of our faculty and staff. These traditions are celebrated by several events held during the year. This May, we will be hosting our 30th Annual Symposium entitled, "Cornea: The Cutting Edge." The symposium is our largest and most important educational event and has continued to grow each year, drawing close to 200 participants. Each June, we celebrate the graduation of our senior residents and fellows during a farewell party, where faculty and graduates "roast" each other in humor and fondness. In July we welcome new residents and fellows and are able to visit with our generous Volunteer Clinical Faculty who help teach the new arrivals.

These traditions are very important to our faculty and staff. Each event helps bond the department, promotes a culture of caring and empathy for our patients and strengthens our commitment to excellence. But there is no other event that exemplifies the value of our traditions better than the "Employee of the Year" Award. Each year faculty and staff select two staff members to receive this award during our December holiday party. Those elected have consistently demonstrated exemplary service, a commitment to professionalism and a passion to providing the best patient care.

We are proud to announce this year's award winners, Susan Garcia and Ellen Redenbo who most certainly honor these traditions.

Susan Garcia

Susan Garcia is a Certified Ophthalmic Technician and research coordinator in the Visual Psychophysics Laboratory within the department. She received her B.A. in French but migrated to the field of ophthalmology shortly after graduating from college. She remembers that even as a child, she found the study of the eye very interesting. Later in life she obtained a position as a back office assistant in the local ophthalmology practice of Michael Schermer, M.D., who is an alumnus of the UC Davis Ophthalmology

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December Holiday Party

John Keltner, M.D., is center stage on the dance floor with Mohini Kumar and Marcella Rangle. Dr. Rosenblatt at backstage

Residents' Farewell Dinner

Graduating Residents' Fairwell Dinner l-r Jeff Caspar, M.D., Residency Director, Bonnie Quiroz, M.D., David Woods, M.D., Huck Holz, M.D.

John & Nancy Keltner watching resident farewell skit

Resident & Fellow Graduation Dinner 2006. Jeff and Susan Caspar far left

Graduating and Current Residents: L-R Allison Smith, M.D. (06), David Woods, M.D. (06), Kevin Merrill, M.D. (08),Bonnie Quiroz, M.D. (06), Cheri Leng, M.D. (07), Huck Holz, M.D. (06), Pauline Lim, M.D. (07)

Donor Recognition Reception

L-R Barbara Arnold, M.D., Frank Sousa, M.D., Michael Schermer, M.D., and Shelly Schermer, Esq.

L-R Exec Assoc Dean Ann Bonham, Ph.D., Michele Lim, M.D., Provost Virginia Hinshaw and CFO Bill McGowan

L-R Ivan Schwab, M.D., Provost Virginia Hinshaw and Lynn Livingston

Pete and Jan Gerrmia and James Brandt, M.D.

Susanna Park, M.D.,Ph.D., lecturing during EnVision lecture and reception

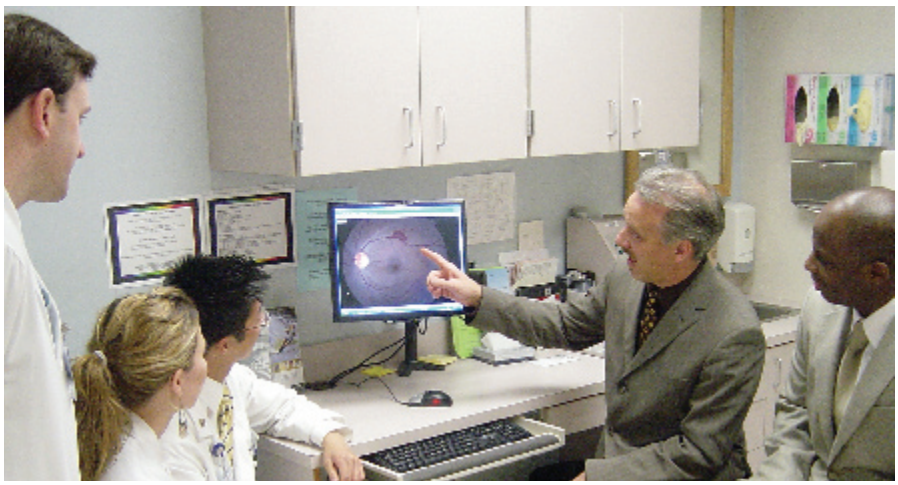
UC Davis Trains the Next Generation of Ophthalmologists

by Jeffrey J. Caspar, M.D.

One of the primary missions of the UC Davis Department of Ophthalmology & Vision Science is teaching the physicians of tomorrow through its residency-training program. Since its beginnings in 1968, the ophthalmology training program at UC Davis has risen to become one of the top training programs in the West. With over 300 applicants each year for its 4 positions, UC Davis strives to train talented, knowledgeable, dedicated, surgically outstanding ophthalmologists interested in a clinical or academic career. The program ranks in the 98th-percentile in ophthalmic surgical training in the U.S. The current Director of Residency Education is Dr. Jeffrey Caspar, who has directed the program for the last 9 years.

After completing four years of medical school and one year of internship, residents begin their three years of training in ophthalmology. Working closely with the faculty, residents receive detailed instruction in the basic and clinical sciences as well as a broad clinical experience in comprehensive ophthalmology. Residents also gain valuable experience in all subspecialty areas of ophthalmology including training in cutting edge laser and surgical techniques. The program gives the residents the opportunity to flourish in an atmosphere that is both rich clinically as well as concerned with the educational development of the resident in training. Residents also participate in ophthalmic research and present their findings at several major ophthalmic meetings each year.

Several of the recent graduates of the program have matched at top fellowship programs. The program has produced several ophthalmologists who have gone on to careers in academic medicine, including one who has gone on to become director of another residency program.



Jeff Caspar, M.D., Residency Program Director (center) with First Year residents.

Department Welcomes Eminent Visiting Professors

The Department of Ophthalmology & Vision Science at UC Davis prides itself on a thriving Visiting Professor program. Each year, renowned authorities in the field visit the Health System campus in Sacramento and participate in patient rounds and lectures to our residents and fellows. This year's roster includes: Claes Dohlman, William Astle (Pediatric Ophthalmology), Richard Lee (Glaucoma), Lawrence Hirst (Cornea), Alan Kreiger (Retina), Russell van Gelder (Uveitis) and Morton Smith (Ophthalmic Pathology).

Dr. Mark Mannis welcomes Dr. Claes Dohlman of the Massachusetts Eye & Ear Infirmary during his visit. Dr. Dohlman, the Dean of American Corneal Specialists, has trained generations of leaders in the field and continues to develop innovations in artificial cornea technology.

Dr. Blodget Donates Instruments

Dr. Blodget and Dr. Mannis in Redding, February 2007.

Dr. Rush Blodget, retired ophthalmogist from Redding, California, has donated a collection of antique ophthalmic books and instruments to the Department of Ophthalmology & Vision Science for its historical display. After practicing ophthalmology as Redding's pre-eminent practitioner in Northern California for over four decades, Dr. Blodget retired but has retained his strong interest in clinical ophthalmic science. The Department thanks Dr. Blodget for his long time support and for his gracious gift of memorabilia.

Current Enrolling Clinical Studies

Patient Adherence to Glaucoma Medication Treatment

PI: Michele C. Lim, M.D.
Sponsor: Allergan
Purpose: To evaluate the effect of physician-patient communication and of eye drop medication dosing on medication adherence (formerly referred to as compliance) in glaucoma patients. Adherence will be directly measured by a passive, electronic event monitor (MEMS® TrackCap®) that provides a date and time stamp of patient eye drop medication use.
Indication: Patients newly diagnosed with glaucoma and have started on a glaucoma eye drop.

A Study of the iStent Trabecular Bypass Micro Stent in Combination with Cataract Surgery in Subjects with Open-Angle Glaucoma – Protocol GC-003

PI: Michele C. Lim, M.D.
Sponsor: Glaukos Corporation
Purpose: To evaluate the safety and effectiveness of the iStent□ in reducing intraocular pressure (IOP) in subjects with open-angle glaucoma and co-existing cataract. This is a surgical study of a device.
Indication: Patients diagnosed with mild open-angle glaucoma and clinically significant cataract(s).

Changes in Optic Nerve Structure and Retinal Nerve Fiber Layer Thickness in Patients Receiving Retinal Laser

PI: Michele C. Lim, M.D.
Sponsor: Department of Ophthalmology & Vision Science
Purpose: 1) To determine if retinal nerve fiber layer thickness surrounding the optic nerve of the eye becomes thinner in eyes with diabetic retinopathy with and without laser photocoagulation to the retina. 2) To determine if optic nerve structure as measured by ocular coherence tomography (OCT) is altered by diabetic retinopathy and/or retinal laser photocoagulation. 3) To compare the use of confocal scanning laser ophthalmoscopy (Heidelberg Retina Tomograph II, HRT) optic nerve measurements with those obtained by OCT.
Indication: Patients with diabetic retinopathy with and without retinal laser treatment, and normal patients without a history of glaucoma, diabetes or serious visual problems.

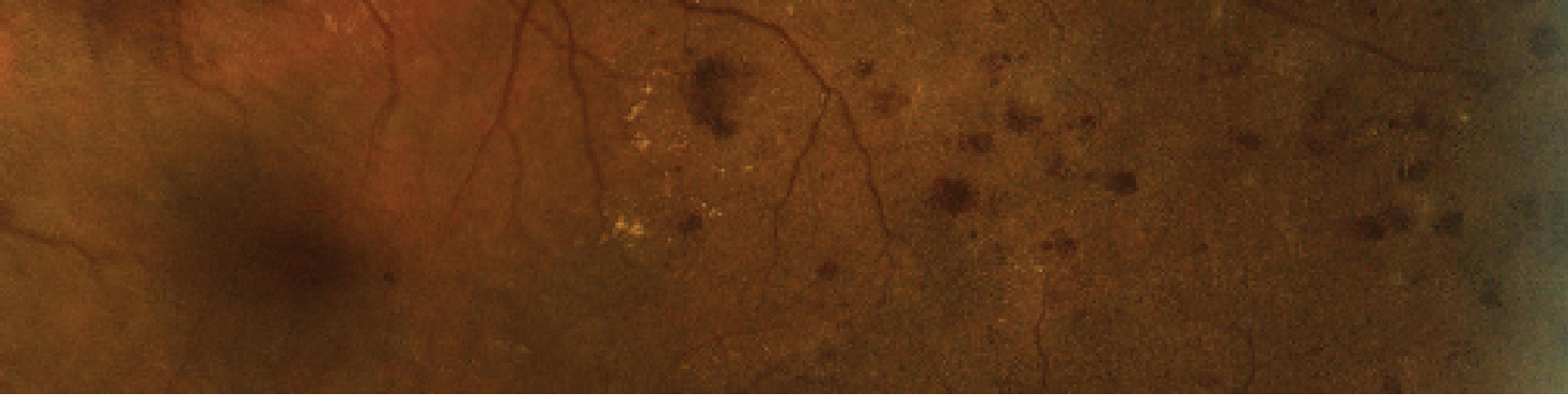
Ahmed versus Baerveldt Comparison (ABC) Study: A randomized, prospective clinical trial comparing the long-term safety and efficacy of the Ahmed glaucoma valve implant (FP-7) with the 350-mm^2 Baerveldt implant (101-350) for surgical control of secondary glaucoma and primary glaucoma in eyes that have undergone previous ocular surgery

PI: Michele C. Lim, M.D.
Sponsor: Department of Ophthalmology & Vision Science along with Bascom Palmer Eye Institute
Purpose: The objective of this study is to compare the long-term safety and efficacy of the Ahmed FP-7 implant and the 350-mm^2 Baerveldt implant in patients who are undergoing aqueous shunt implant surgery.
Indication: Patients with inadequately controlled glaucoma who are scheduled for drainage implant as planned surgical procedure

Ocular Rosacea: Determining a Specific Diagnostic Test

PI: Mark J. Mannis, M.D.
Sponsor: Department of Ophthalmology & Vision Science
Purpose: To determine whether a new diagnostic tool can accurately provide a rapid, cost-effective test for early detection of ocular rosacea. This will potentially lead to considerably earlier treatment and the avoidance of complications that accrue from chronic ocular inflammatory disease.
Indication: Patients with ocular rosacea and with non-roseatic blepharitis, along with normal subjects.

Keratoprosthesis in Severely Dis-

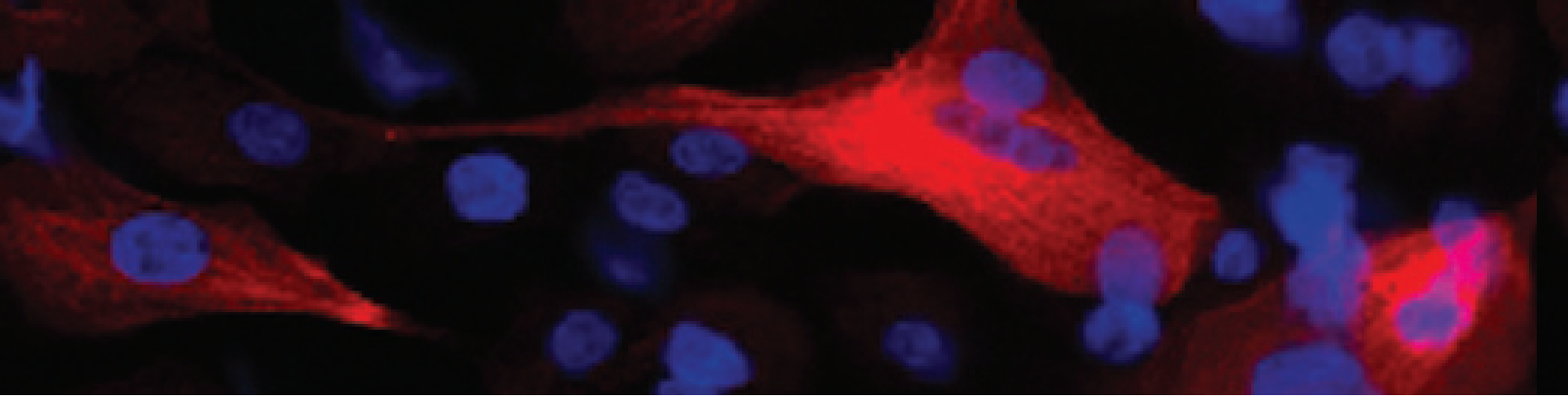


eased Corneas
PI: Mark J. Mannis, M.D.
Sponsor: Department of Ophthalmology & Vision Science along with Harvard University
Purpose: To implant either the keratoprosthesis Type I or Type II in severely diseased corneas to serve as an artificial cornea. Type I is for those who have experienced graft failure previously and Type II is for extremely dry eye.
Indication: Patients with severely diseased corneas where normal cornea transplants have been tried and failed.

A Six-Month, Phase 3, Multicenter, Masked, Randomized, Sham-Controlled Trial (With Six-Month Open-Label Extension) to Assess the Safety and Efficacy of 700 μg and 350 μg Dexamethasone Posterior Segment Drug Delivery System (DEX PS DDS) Applicator System in the Treatment of Patients with Macular Edema Following Central Retinal Vein Occlusion or Branch Retinal Vein Occlusion (Protocol 206207-009)
PI: Lawrence S. Morse, M.D., Ph.D.
Sponsor: Allergan
Purpose: To investigate the safety and effectiveness of Dexamethasone Posterior Segment Drug Delivery System (DEX PS DDS) in the treatment of macular edema due to central retinal vein occlusion or branch retinal vein occlusion. The DEX PS DDS will deliver dexamethasone to the back of the eye by way of an Applicator System which is a sterile, single use device shaped like a pen with a needle on one end. The DEX PS DDS slowly releases dexamethasone and dissolves over time.
Indication: Patients will have macular edema due to central retinal vein occlusion or branch retinal vein occlusion.

Age-Related Eye Disease Study 2 (AREDS2): A Multi-Center, Randomized Trial of Lutein, Zeaxanthin, and Omega-3 Fatty Acids in Age-Related Macular Degeneration
PI: Lawrence S. Morse, M.D., Ph.D.
Sponsor: National Institutes of Health
Purpose: To learn what role nutritional supplementation with lutein and zeaxanthin and/or long-chain omega-3 fatty acids, specifically docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), play in preventing or slowing the development of Age Related Macular Degeneration. Lutein and zeaxanthin are carotenoids, yellow and orange pigments found in many fruits and vegetables, including corn, sweet potatoes, carrots, squash, tomatoes and dark leafy greens such as kale, spinach and collards. Lutein and Zeaxanthin may play a role in maintaining eye health. Both are present in higher levels in the retina and lens of the eye than other carotenoids. DHA and EPA are fatty acids found in fish oil. DHA is essential for normal brain and eye development. DHA can be found in high amounts in the rods and cones of the eye. The rods and cones receive and process information we use to see. An additional goal of the study is to learn whether forms of the AREDS nutritional supplement with reduced zinc and/or no beta-carotene will work as well as the original supplement in reducing the risk of progression to advanced AMD.
Indications: The subjects must have large drusen in both eyes or large drusen in one eye and advanced Age Related Macular Degeneration in the fellow eye.

A 3-Year, Phase 3, Multicenter, Masked, Randomized, Sham-Controlled Trial to Assess the Safety and Efficacy of 700 μg Dexamethasone
Posterior Segment Drug Delivery System (DEX PS DDS) Applicator System in the Treatment of Patients with Diabetic Macular Edema
PI: Susanna S. Park, M.D., Ph.D.
Sponsor: Allergan
Purpose: The purpose of this study is to investigate the safety and effectiveness of Dexamethasone Posterior Segment Drug Delivery System (DEX PS DDS) in the treatment of diabetic macular edema.



The DEX PS DDS will deliver dexamethasone to the back of the eye by way of an Applicator System which is a sterile, single use instrument shaped like a pen with a needle on one end. The DEX PS DDS slowly releases dexamethasone and dissolves over time.
Indication: The subjects will have diabetic macular edema in at least one eye.

Nasolacrimal Duct Obstruction Study (NLD2) - A Prospective Study of Surgical Procedures for the Treatment of Persistent Nasolacrimal Duct Obstruction in Children Less Than Four Years Old

PI: Mary O'Hara, M.D.
Sponsor: National Eye Institute
Purpose: The primary objective of the study is to report the success proportions for the treatment of persistent nasolacrimal duct obstruction (blocked tear duct) for three surgical procedures: balloon catheter dilation, nasolacrimal intubation, and simple probing.
Indication: Patients aged 6 months - <4 years who have at least one clinical sign of nasolacrimal duct obstruction, a history of failed simple probing, and for whom the investigator has decided to perform another surgical procedure for treating the nasolacrimal duct obstruction.

An Observational Study of Infantile, Acquired Non-Accommodative and Acquired Partially-Accommodative Esotropia

PI: Mary O'Hara, M.D.
Sponsor: National Eye Institute
Purpose: This is an observational study with the objectives of 1) determining the duration of misalignment in infantile esotropia (infantile ET), acquired non-accommodative esotropia (ANAET), and acquired partially-accommodative esotropia (APAET) at study enrollment; 2) prospectively establishing the proportion of patients with angle instability in infantile ET, ANAET, and APAET; and 3) determining recruitment potential for a randomized trial. (Esotropia: one eye turns in towards nose, the other focuses straight ahead.)
Indication: Infants to children less than 5 years old with infantile esotropia, acquired non-accommodative esotropia or acquired partially-accommodative esotropia.

A Randomized Trial Comparing Near Versus Distance Activities While Patching for Amblyopia in Children 3 to <7 Years Old

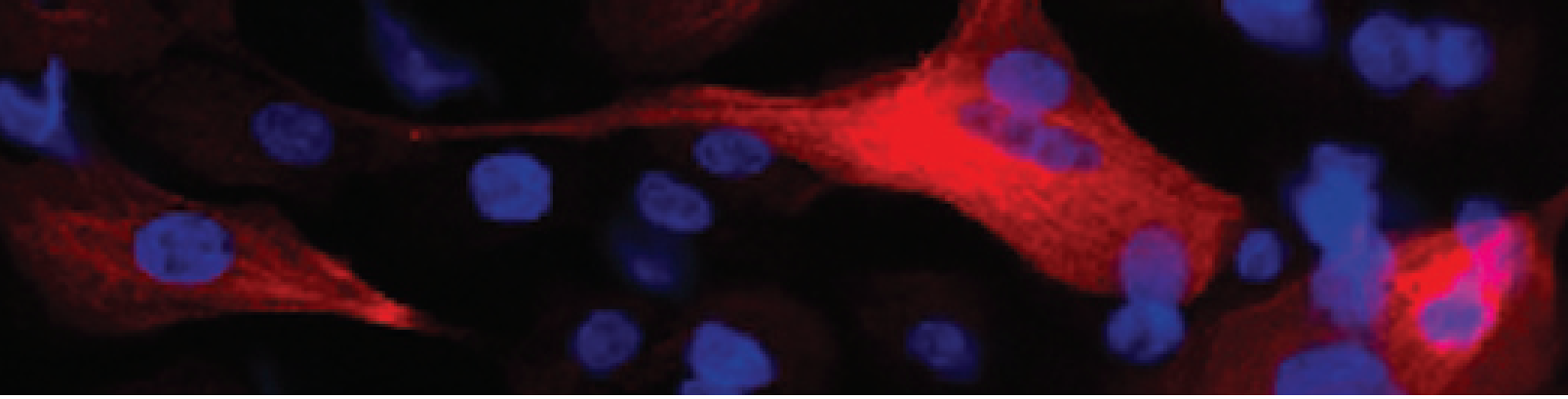
PI: Mary O'Hara, M.D.
Sponsor: National Eye Institute
Purpose: The purpose of this study is to determine whether it is better for children to do near activities while wearing the patch or whether distance activities such as watching television or playing outdoors are just as good.
Indication: Children age 3 to less than 7 years old who have been diagnosed with amblyopia (lazy eye: decreased vision in one or both eyes).

PCR with Mass Spectrometry for Identification and Quantification of Unique or Multiple Pathogens in Patients with Bacterial Keratitis

PI: Mark Rosenblatt, M.D., Ph.D.
Sponsor: Department of Ophthalmology & Vision Science
Purpose: We hope to learn more about the care, treatment, and visual outcomes of patients with a bacterial keratitis (infection).
Indication: Patients 18 years of age and older suspected of having bacterial keratitis.

Histologic anad Immunohistologic Evaluation of Pre-Retinal Membranes

PI: David G. Telander, M.D., Ph.D.
Sponsor: Department of Ophthalmology & Vision Science
Purpose: To collect the pre-retinal membranes (surgical specimen) from patients having standard-of-care surgery for proliferative vitreoretinopathy, macular pucker, and diabetic fibrovascular membranes to understand how these membranes develop so we can design methods to prevent the vision loss they cause.
Indication: Patients scheduled for a vitrectomy surgery for either proliferative vitreoretinopathy, macular pucker, or diabetic fibrovascular membranes.



A Phase IV, Open label, Multi-Center Trial of Maintenance Intravitreous Injections of Macugen® (Pegaptanib Sodium) Given Every 6 Weeks for 48 Weeks in Subjects with Subfoveal Neovascular Age-Related Macular Degeneration (AMD) Initially Treated with a Modality Resulting in Maculopathy Improvement (LEVEL Study)

PI: David G. Telander, M.D., Ph.D.
Sponsor: (OSI) Eyetech, Inc.
Purpose: The purpose of this trial will be to explore the safety and effectiveness of maintenance injections of Macugen® (pegaptanib sodium) when given every 6 weeks for 48 weeks in subjects with wet macular degeneration. Subjects will have been treated previously but have a dry macula (leakage has stopped due to the previous treatment regimen), based upon clinical and/or anatomical findings as determined by the investigator and an Optical Coherence Tomography (OCT).
Indication: Subjects 50 years of age or older must have had at least 1, but not more than 3, prior treatments for neovascular age-related macular degeneration ("wet") which have occurred between 30 and 120 days prior to entry; and led to improvement of exudative maculopathy.

The Effects of Diabetes on Viscosity in Conjunctival and Retinal Blood Vessels

PI: David G. Telander, M.D., Ph.D.
Sponsor: Department of Ophthalmology & Vision Science
Purpose: The purpose of this study is to compare the flow of blood in conjunctival and retinal vessels in diabetic patients compared to normal patients.
Indication: Subjects 18 years of age or older with: Advanced diabetics, moderate diabetics, subclinical diabetics, non-diabetics (normal, age-matched volunteers).

A Phase II/III Study of Encapsulated Human NTC-201 Cell Implants Releasing Ciliary Neurotrophic Factor (CNTF) for Participants with Retinitis Pigmentosa Using Visual Acuity as the Primary Outcome – Protocol Designation CNTF-3

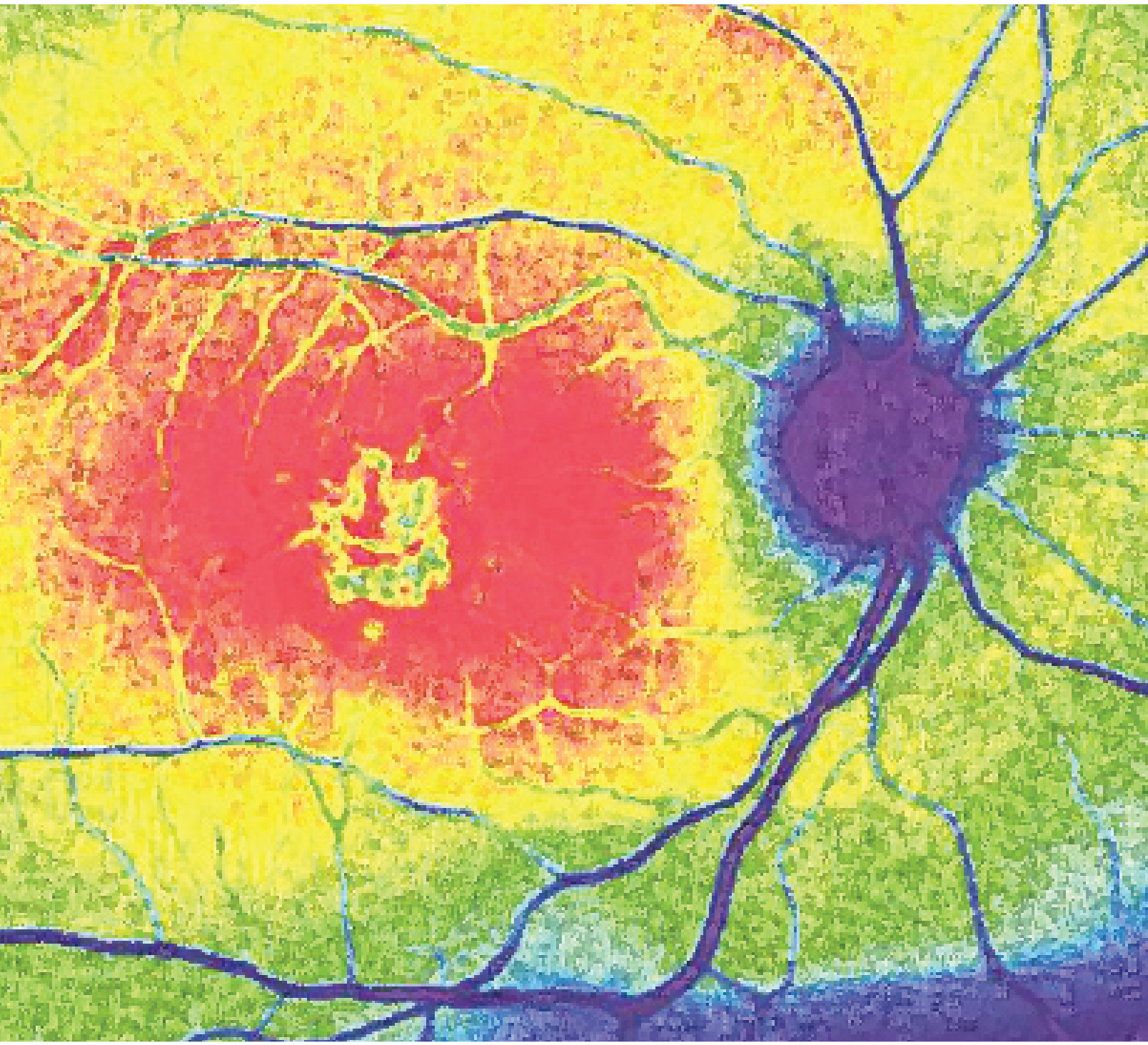
PI: David G. Telander, M.D., Ph.D.
Sponsor: Neurotech USA, Inc.
Purpose: To assess the effectiveness of the investigational product, Ciliary Neurotrophic Factor (CNTF) implants, in treating participants with Retinitis Pigmentosa (RP) by way of best-corrected visual acuity. Implants will be surgically placed in the retina.
Indication: Subjects over 18 but less than 65 years of age with Retinitis Pigmentosa.

A Phase II/III Study of Encapsulated Human NTC-201 Cell Implants Releasing Ciliary Neurotrophic Factor (CNTF) for Participants with Retinitis Pigmentosa Using Visual Field Sensitivity as the Primary Outcome – Protocol Designation CNTF-4

PI: David G. Telander, M.D., Ph.D.
Sponsor: Neurotech USA, Inc.
Purpose: To assess the effectiveness of the investigational product, Ciliary Neurotrophic Factor (CNTF) implants, in treating participants with Retinitis Pigmentosa (RP) to improve or lessen peripheral vision loss. Implants will be surgically placed in the retina.
Indication: Subjects over 18 but less than 65 years of age with Retinitis Pigmentosa.

Prospective Biometric Study of Glaucoma Eyes Before and After Trabeculectomy Surgery

PI: James D. Brandt, M.D.
Sponsor: Department of Ophthalmology & Vision Science
Purpose: After glaucoma surgery, some eyes become smaller because of the lower pressure that is caused by the surgery. We are interested in finding out what is different in those eyes that shrink more than others. We believe that some measurements, like the thickness of the cornea (the clear part of the eye) or an eyeglass prescription, might help us predict how eyes behave after surgery.
Indication: Subjects over 18 but less than 65 years of age with glaucoma scheduled to undergo a trabeculectomy surgery.



Vision Science Research Group

Celebrating Ten Years of "Collaborative" Vision Science Research

by Robert August, R.N.

The Vision Science Research Group (VSRG) is entering its tenth year of operation following its founding by Leo Chalupa, Ph.D. and John Keltner, M.D. The group's first effort was to obtain a National Eye Institute (NEI) Core Grant which was accomplished through the efforts of Leo Chalupa, Ph.D., principal investigator (PI). The NEI Core Grant was initially awarded in 1997 to support three research modules which served forty-five VSRG members. It is noteworthy that in 2007, the VSRG has grown to 76 members, from 17 departments, holding 43 NEI/NIH grants. The Core Grant now supports four research modules: Microscopic Anatomy Module (directed by Paul FitzGerald), a Computational Module at the Center for Neuroscience (directed by Ken Britten), a Tissue Culture Module at the Life Sciences Addition (directed by Martin Wilson) and a Machine Shop Module (directed by John Werner). These four modules provide support for all vision researchers at UC Davis. Visual Science Research is broadly represented throughout UCD: the Department of Ophthalmology & Vision Science in Sacramento; the Neuroscience Center; the Neurobiology, Physiology & Behavior Section of Division of Biological Sciences; School of Veterinary Medicine; and the Primate Center on the Davis campus.

A major accomplishment of the VSRG is the publication of the textbook, The Visual Neurosciences, edited by Leo Chalupa, Ph.D. and John S. Werner, Ph.D. The Visual Neurosciences consists of 114 chapters by leading figures in vision science from 13 different countries. Because this book includes leaders in the field, it is noteworthy that nine vision scientists at UC Davis are involved in the project, more than from any other university. These authors are distributed across five departments, attesting to the breadth as well as the recognition of our Vision Science Research Group. This textbook is a landmark publication because it is the definitive handbook of vision science. There is no other comparable text.

Through the efforts of John Werner, Ph.D., the Training Grant was awarded in 2003. The program has 31 vision scientists (24 preceptors and 13 associate preceptors) across 11 departments at the University of California, Davis.

The Training Grant supports four pre-docctoral and two postdoctoral trainees who are selected by an Advisory Committee. The trainees participate in one or more of the five areas in which UC Davis has groups with vision science expertise: (i) molecular biology and genetics, (ii) anatomy and physiology, (iii) retinal imaging, (iv) central mechanism neurophysiology and behav-

continued on page 39

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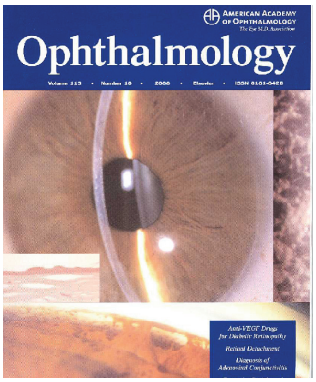

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Dan King continued from page 13

stand that and continue to insist on very high standards of eye care."

And what more of photography and golf? Dan King the photographer continues to exhibit his work in Red Bluff and annually at the Tehama County Fair. His favorite subjects are those he discovers on his trips to the national parks. One of his new discoveries made on a recent trip to the Carlsbad Caverns area is spelunking. Although he doesn't think that spelunking (cave exploration) will replace his passion for golf (he modestly claims a 6 handicap, 4 in the summertime due to better playing weather), his guided exploration of Spider Cave near the Carlsbad Caverns was one of the high points of his recent national park visits.

Dr. King shares his practice and his life with his wife, Sherry, who is a registered nurse and his practice's office manager. The couple has three sons, and indeed, his life is very full.

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Employees of the Year continued from page 17

residency program. Susan recounts that Dr. Schermer provided her with an unforgettable base of knowledge and skills from which she founded her career in ophthalmology. She has been in the field since 1989. In 1993, she obtained a position at UC Davis where she worked as a clinic technician for several years before going into vision science research. She now coordinates, recruits, screens and tests human subjects.

Ellen Redenbo is a native of Sacramento, where she graduated from a local photography school in 1981. After 4 years working in newspaper photography and advertising, she went to work for a retina specialist for four years, where she learned ophthalmic photography and technical support. Ellen relocated to Portland, OR in 1990. She went to work at Oregon Health Sciences University and Casey Eye Institute. There she worked and trained for 15 years with their Ophthalmic Photography group.

Ellen has been involved in over 20 studies involving photography and ultrasound including localization of plaque placement in the operating room, use of ultrasound for localization of retro bulbar needle placement study, retinophy of prematurity study and a collaborative ocular melanoma study. She joined the UC Davis Department of Ophthalmology & Vision Science Imaging Center in September of 2005 and continues to pursue her interest in ultrasound and photography.

Congratulations to Susan and Ellen, our Employee of the Year award winners for 2006. Their professionalism and commitment to our mission of providing the best patient care, advancing research, teaching, and community service truly represent the heart and spirit of our department.

Vision Science Research Group continued from page 27

ior, and (v) functional imaging, computational modeling and psychophysics. Each of the 24 preceptors has an active program of vision science research, a strong commitment to training and sufficient extramural funding to support pre-doctoral and/or postdoctoral trainees. The goal of the training program is to produce vision scientists who will be capable of establishing independent research programs that will address significant problems in vision science. It is an extraordinary achievement for UC Davis and the VSRG to be awarded both the NEI Core Grant and Training Grant.

The purpose of the VSRG is to promote vision science research and to acquaint faculty, post-doctoral fellows and graduate students with the activities and expertise in vision research available at UC Davis. The VSRG meets each quarter, inviting renowned guest speakers from around the world to lecture on vision science research. The VSRG has proven to be a valuable forum, bringing together clinical research faculty and basic science researchers to further promote collaboration among all vision science research.

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