Jules Stein Eye Institute

EYE

Spring 2007 Volume 26, No. 1

Looking Ahead:

How Research Has Set the Stage for Exciting Clinical Advances in the Next Decade

Over the course of its 40-year history, the Jules Stein Eye Institute has been a leader in basic and clinical vision research. As outlined in the last issue of EYE, the Institute's four decades have been distinguished by milestone advances in the prevention, diagnosis and treatment of eye diseases. Equally important has been research that has led to a clearer understanding of mechanisms underlying these diseases. With that understanding, there is great optimism that the pace of clinical progress will only accelerate. In the following breakdown by specialty area, faculty discuss some of the most exciting clinical advances on the horizon.

Retina

The retina, the thin layer of neural cells lining the back of the eyeball, is involved in conditions affecting millions of people, including the leading causes of vision loss in the developed world: age-related macular degeneration (AMD) and diabetic retinopathy. But major changes are afoot as the Institute has begun to translate laboratory findings into new drug therapies for the treatment of these neovascular diseases, both of which are characterized by abnormal blood vessel growth and leakage. "The development of drugs that block the proteins that cause new blood vessel growth and leakage has revolutionized the way we take care of these patients," says **Steven D. Schwartz, MD**, chief of JSEI's Retina Division.

The majority of patients with "wet" AMD are now being treated with one of several drugs recently approved by the FDA. These patients, who would otherwise have a 90–95 percent chance of becoming legally blind in one or both eyes within a few years, now have roughly those odds of experiencing no further visual loss; moreover, 30–40 percent are regaining key elements of their vision. Researchers in the Division are currently studying the feasibility of applying this approach to cases of diabetic retinopathy as well as to patients with retinal vein occlusions and retinopathy of prematurity, which are also major causes of retinal blindness. Division researchers are also looking for ways to detect these diseases earlier, treating them before significant damage occurs. With ultra-wide-field angiography of the retina, it is becoming possible to detect blood flow abnormalities earlier in the course of some of these diseases, the idea being that earlier detection and intervention lead to better outcomes.

Cornea specialist Dr. Anthony Aldave holds tissue from a donor that will be used for cornea transplantation surgery. He anticipates that artificial corneas will be more widely used in the future as new biocompatible materials are further refined.

Further down the road, Dr. Schwartz believes it will be possible to identify patients who are genetically or otherwise at risk and intervene before these diseases manifest. "Cardiologists have gone from just treating the heart attack to preventing the plaque buildup that leads to the heart attack," Dr. Schwartz notes. "In the same way, JSEI Vision Science researchers are studying the visual cycle to determine at which level of the cycle they

can intervene. In addition, the Retina Division is beginning to investigate targeted drug therapies that will block the buildup of materials at the back of the eye that lead to age-related macular degeneration." The Retina Division has recruited **Michael Gorin, MD, PhD**, a clinician scientist credited with identifying genetic regions that contribute to AMD. "Developing a molecular means of identifying and treating people at risk for vision loss caused by AMD, a long-term goal of the JSEI Retina Division, is now much closer to fruition," says Dr. Schwartz.

Cornea and Uveitis

JSEI researchers are also making great progress in treating problems occurring in the cornea, the eye's outer covering. Already, this is starting to enable greater precision in surgical and medical treatment through the use of new materials, new instruments, and new drugs.

Improved materials are beginning to make a difference in a number of areas. For patients who need new corneas but are at high risk for rejection of a donor organ, artificial corneas have become a more viable option, according to **Gary N. Holland, MD**, chief of JSEI's Cornea and Uveitis Division. "We anticipate that with further refinements in materials, these procedures will be even more successful and will be more widely adopted," agrees **Anthony J. Aldave, MD**, director of the Division's cornea service. New materials that are biocompatible will also allow future clinicians to close wounds after corneal transplants with glue-like substances rather than sutures. "It is going to be a better-sealed wound, closed faster, without the problem of sutures coming loose and being exposed, and without the need to have the sutures removed," Dr. Holland explains.

Dr. Holland also foresees increased use of lasers for creating incisions during surgery—an approach that has also begun to be used at the Institute. "This is leading to an improvement in precision over making corneal incisions with a blade," he says. "It will also help us to customize the shape of the wound for an individual patient, which will allow better visual results and fewer complications following corneal transplantation.

With continuing progress in understanding disease mechanisms and the genetic basis for ocular problems, the future also looks bright for non-surgical treatments that target the specific problem causing a disease. For example, if a specific enzyme is known to be deficient or abnormal in a patient with certain kinds of corneal opacities, it can be addressed through targeted gene or drug therapies. With regard to uveitis (inflammation inside the eye), most current therapies suppress inflammation non-specifically with corticosteroids; in the future, a more direct approach will take aim at the specific part of the immune system causing the problem. This approach is already beginning to occur at JSEI, with new drugs for the treatment of disorders such as uveitis in children with juvenile rheumatoid arthritis, Dr. Holland notes.

Orbital and Ophthalmic Plastic Surgery

Many problems of the eye are both functional and aesthetic. Research in JSEI's Orbital and Ophthalmic Plastic Surgery Division has tackled both concerns. Particularly noteworthy are the strides being made in treating—and, potentially, preventing—Graves' disease, a disorder of the immune system that causes the majority of its victims to experience problems with sight and/or appearance (typically, bulging eyes).

In the last 10 years, treatment of Graves' disease symptoms has evolved. The Institute has pioneered an approach known as deep lateral wall orbital decompression surgery, leading to significantly fewer complications, less double vision and more rapid recovery. Increasingly, this surgery is now performed on an outpatient basis. Researchers in the Division are continuing to refine surgical techniques, using endoscopic, laser, and robotic technologies. **Robert A. Goldberg, MD**, chief of the Division, notes that future advances in molecular biology are likely to bring major improvements in the area of wound healing after surgery. The other assist will come from advances in imaging and surgical technology. "We are going to have better ways to diagnose problems and more sophisticated surgical instrumentation," says Dr. Goldberg, who sees a movement toward more minimally invasive surgeries not only for Graves' disease patients, but also for patients with orbital tumors or diseases of the tear system, and those who seek aesthetic surgery.

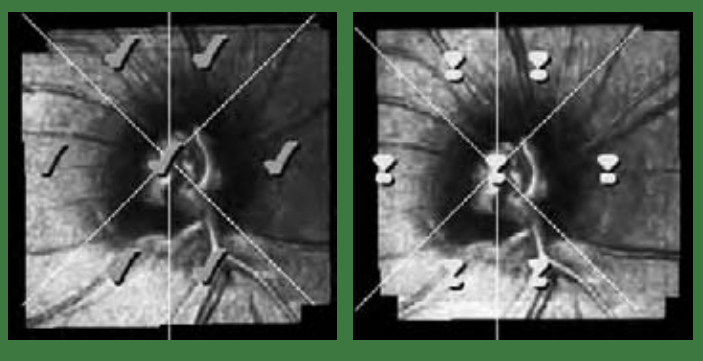
A patient with Graves' disease benefits from deep lateral wall orbital decompression surgery, which was pioneered at the Jules Stein Eye Institute. Current research at the Institute could soon enable Graves' disease to be treated non-surgically before it begins to cause problems.

Even more exciting is research that could soon enable Graves' disease to be treated before it begins to cause problems. A JSEI research group headed by **Terry J. Smith, MD**, has discovered an antibody associated with the disease and, in the laboratory, has successfully tested a therapy to block the process triggered by the antibody. Dr. Smith is now teaming with **Raymond Douglas, MD, PhD**, in an effort to translate these laboratory findings into a new non-surgical treatment that could stave off the disease before it takes hold. "I am optimistic that within a couple of years, we will be ready to test patients in clinical trials, and that soon, Graves' will be seen as a treatable disease," says Dr. Goldberg.

Glaucoma

Approximately 2.2 million people in the United States have glaucoma, the nation's second-leading cause of adult blindness, and half are unaware that they have the condition because early symptoms are rare. Current research is paving the way toward earlier detection of glaucoma, which would enable patients to be treated before the disease robs them of much of their vision. With more sophisticated image-analysis techniques and laser scanning devices, future specialists will be better able to recognize early damage by evaluating the appearance of the optic nerve.

In addition, efforts are aimed at finding better ways of predicting how the disease will progress. "With glaucoma, it is not only a matter of recognizing it early," says **Joseph Caprioli, MD**, chief of JSEI's Glaucoma Division. "It is also important to know the rate of the individual's disease." The rate at which glaucoma progresses varies widely, he notes. While younger patients in whom the disease is rapidly advancing need aggressive treatment, older patients with slowly progressing glaucoma could die with their vision intact, and can be spared the side effects and potential complications of aggressive treatment. The Institute is developing sensitive



Improved laser scanning of a patient's eye shows no evidence of glaucoma (left) and borderline glaucoma (right) years later. The Institute is developing sensitive measures of the disease's progression to enable future specialists to treat glaucoma patients before vision has been compromised.

EYE

Newsletter
Is a Publication
of the
Jules Stein Eye Institute

Director
Bartly J. Mondino, MD

Editors
Debora B. Farber, PhD, DPhhc
Gary N. Holland, MD

Managing Editor
Gloria P. Jurisic

Contributing Editors
Teresa Closson
Nancy Graydon
Debbie Sato
Lori Twitchell
Melania Vartanian

Guest Editor
Dan Gordon

Photography
J. Charles Martin

Design
Robin Weisz /Graphic Design

Production Coordination
Coniglio & Associates

Jules Stein Eye Institute
100 Stein Plaza, UCLA
Box 957000
Los Angeles, CA 90095–7000
(310) 206-6035

www.jsei.org

measures to detect small amounts of progression so that glaucoma patients can be monitored to determine when treatment needs to be intensified.

Ultimately, Dr. Caprioli believes the Institute will move toward glaucoma treatments that make the optic nerve more resistant to damage from the disease, a strategy known as neuroprotection. "This is the most exciting area for us and it will represent a new dimension of treatment," Dr. Caprioli explains. "Up to now, the only treatment we have is to lower the eye pressure, but in as many as half of the patients, the disease continues to progress despite our best efforts." In the future, Dr. Caprioli sees a two-pronged treatment that would combine pressure reduction with medications protecting the optic nerve.

Pediatric Ophthalmology and Strabismus

The future may also include gene therapy approaches to conditions that are all too common in children, including a number of congenital eye diseases affecting the retina; optic nerve abnormalities; and cases in which the eye muscles are not formed properly or not properly innervated, including strabismus, according to **Arthur L. Rosenbaum, MD**, chief of the Pediatric Ophthalmology and Strabismus Division. In the years to come, innovative methods may also further reduce blindness in children.

Division members **Sherwin J. Isenberg, MD**, and **Leonard Apt, MD**, (emeritus) are initiating studies of an inexpensive medication to treat corneal infections caused by fungi and trachoma, an infection of the conjunctiva that blinds millions in developing countries. Dr. Isenberg and associates are also developing and testing an instrument that measures blood gases (oxygen and carbon dioxide) as well as bicarbonate and pH from the surface of the eye, decreasing the need to draw blood. The device has the potential to reduce childhood blindness by decreasing the incidence of Retinopathy of Prematurity and postnatal cerebral palsy.

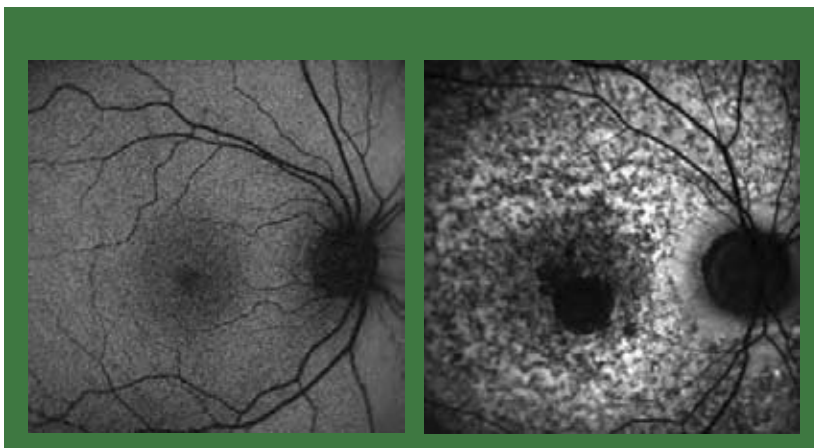
JSEI pediatric ophthalmology specialists Drs. Leonard Apt (left) and Sherwin Isenberg (right) completed a study of treating bacterial corneal infections with an effective and inexpensive iodine based medication in India and the Philippines. They will next study the treatment of fungus caused corneal infections, which blind millions in developing countries.

Dr. Rosenbaum and Institute colleague **Federico Velez, MD**, are conducting laboratory research to determine how to re-innervate paralyzed eye muscles by utilizing computer chips and innervational signals from adjacent muscles. "These studies could have important implications for treating many adult and childhood strabismic disorders in which the nerve to the eye muscle is injured or a brain tumor or other neurologic cause prevents the nerve from functioning correctly," Dr. Rosenbaum explains. Researchers are also seeking more accurate ways to assess visual function in infants so that ophthalmologists can better determine whether certain eye disorders, such as congenital cataracts and drooping eyelid, are interfering with infants' vision and know whether to be more aggressive in treatment.

An investigative team led by **Joseph L. Demer, MD, PhD**, is continuing to develop special magnetic resonance imaging (MRI) techniques that provide the most detailed view of the eye muscles. This will further improve surgical outcomes by enhancing the precision of diagnosis for complicated strabismus cases. Dr. Demer is also refining the hardware and software used for imaging the eye and eye socket. "We expect to have microscopic resolution by MRI of the ocular structures within five to 10 years," he says. "That would have enormous clinical implications by non-invasively providing pictures of small tumors, inflammations, and abnormalities of muscles behind the eye that could not be detected in other ways, except by doing surgery and biopsy."

Vision Science

Fundamental to these and other future advances are studies in Institute laboratories that enhance the understanding of ophthalmic disorders. Treatment for age-related macular degeneration has moved from highly invasive measures to the drug injections described in the Retina section on the first page, which have dramatically improved care for the 10 percent of patients with the more dangerous "wet" form of the disease. Now, researchers in JSEI's Division of Vision Science are poised to parlay their AMD understanding of the genetics of into treatments, if not cures, for the full spectrum of the disease, including the "dry" form. "There has been a great leap forward in the last year on the genetics of the disease, which makes it possible to start studying the cell biology to determine how to intervene in a less invasive way," says Division member **Dean Bok, PhD**.



Autoflourescent images show a normal retina (left) and the retina of a patient who has recessive Stargardt macular dystrophy (right). The large bright spots represent the presence of a toxic molecule called A2E that accumulates as a result of a gene mutation. Scientists at the Institute are working on methods to reduce or prevent the accumulation of A2E.

Research in the laboratory of **Debora B. Farber, PhD, DPhhc**, has described several genes that, when mutated, cause different forms of retinitis pigmentosa and other retinal degenerations in people. In her laboratory as well as several others at the Institute, including those of **Gabriel H. Travis, MD**, **Xianjie Yang, PhD**, and **Dr. Bok**, fundamental work also has been done on the genes causing Usher syndrome and Stargardt macular dystophy. This understanding has paved the way for breakthrough treatments. Scientists at JSEI have begun studying gene therapy in the laboratory for inherited eye diseases in animals, and at the national level, two clinical trials are already scheduled for a potentially curative approach to Leber congenital amaurosis, another retinal degenerative disease. The research of **Joseph Horwitz, PhD**, is also having a fundamental impact on vision science. Dr. Horwitz has discovered that one of the major proteins in the eye lens, alpha-crystallin, acts as a molecular chaperone protecting other proteins from aggregating—a finding that could lead to new approaches to cataracts.

The Stage is Set

It is an exciting time at the Jules Stein Eye Institute. Many of the fundamental advances that have taken place in the Institute's laboratories in the last 40 years are now being translated into better approaches to diagnosing, treating and preventing eye diseases. There is a sense that the clinical progress thus far represents only the tip of the iceberg, and that the next decade will see even more dramatic improvements that will lead to better vision and enhanced quality of life for people all over the world.

INSTITUTE NEWS

JSEI Members Assume AUPO Leadership Positions

The Jules Stein Eye Institute at UCLA is proud to announce the appointment of three of its own members to key posts within the Association of University Professors of Ophthalmology (AUPO). AUPO represents departments of ophthalmology nationwide. The organization provides support and information to departmental chairs and other faculty members, promotes excellence in ophthalmic education and vision research, and promotes excellence in eye care in order to ensure the best possible vision for the public.

Chairman of the UCLA Department of Ophthalmology and Director of the Jules Stein Eye Institute, **Bartly J. Mondino, MD**, is the current AUPO Executive Vice President. Professor of Clinical Ophthalmology, **Anthony C. Arnold, MD**, serves as the President of the AUPO Program Directors Council, which advances ophthalmology residency education on a national level. Finally, JSEI Chief Operating Officer **Jonathan Smith** serves as the President of the AUPO University Administrators of Ophthalmology, which promotes effective and professional administrative support of medical education, research and patient care, particularly as it concerns departments of ophthalmology.

(Left to right) Mr. Jonathan Smith, Dr. Bartly Mondino and Dr. Anthony Arnold were appointed to key posts within AUPO.

Faculty Honors and Awards

Dolly Green Professor of Ophthalmology and Professor of Neurobiology at UCLA **Dean Bok, PhD**, presented the keynote address, "The Retinal Pigment Epithelium: Its Role in Inherited Retinal Diseases," at the 1st International Congress of the International Society for Ocular Cell Biology at Homerton College, in Cambridge, England, on September 6, 2006. Dr. Bok also received the Paul Kayser International Award in Retina Research at the XVII International Congress for Eye Research held in Buenos Aires, Argentina, on October 29–November 3, 2006. The award included a prize of $50,000 and a Plenary Lecture entitled, "The Retinoid (visual) Cycle in Health and Disease."

Joseph Caprioli, MD, David May II Professor of Ophthalmology, received an Editors' Choice Award from the Editors-in-Chief of the three major clinical ophthalmology journals: *American Journal of Ophthalmology*, the *Archives of Ophthalmology* and *Ophthalmology*, for his paper "Trabeculectomy with Mitomycin C in Pseudophakic Patients with Open-Angle Glaucoma: Outcomes and Risk Factors for Failure." The paper was presented at the American Academy of Ophthalmology (AAO) in Las Vegas, Nevada, on November 11–14, 2006.

Anne L. Coleman, MD, PhD, Frances and Ray Stark Professor of Ophthalmology at the Jules Stein Eye Institute, presented the 14th Arthur Light, MD Memorial Lecture in Ophthalmology at Loyola University Medical Center, Stritch School of Medicine, in Chicago, Illinois, on September 6, 2006. The subject of the lecture was, "Predicting Glaucomatous Progression with Imaging."

Laraine and David Gerber Professor of Pediatric Ophthalmology **Sherwin J. Isenberg, MD**, presented the Second Eugene R. Folk Memorial Lecture at the Pediatric Ophthalmology Symposium at the University of Illinois, in Chicago, Illinois, on September 27, 2006. The title of the lecture was,"Long Term Results of Strabismus Surgery." Dr. Isenberg, a former Heed Fellow, also received the prestigious Heed Award in recognition of his contributions to ophthalmology. The Award was presented at the annual AAO meeting in Las Vegas, Nevada, on November 11–14, 2006.

Kevin M. Miller, MD, Kolokotrones Professor of Ophthalmology at the Jules Stein Eye Institute, received the American Academy of Ophthalmolgy 2006 Senior Achievement Award at the AAO annual meeting in Las Vegas, Nevada, on November 11–14, 2006. The Award was presented in recognition of his significant contributions to the Academy, its scientific and educational programs and to ophthalmology.

JSEI Welcomes New Faculty Michael B. Gorin, MD, PhD

The UCLA Department of Ophthalmology and Jules Stein Eye Institute proudly announce the appointment of **Michael B. Gorin, MD, PhD**, as Professor of Ophthalmology in the Retina and Vision Science Divisions, and Harold and Pauline Price Chair in Ophthalmology, effective September 5, 2006. Dr. Gorin comes to the Jules Stein Eye Institute with outstanding qualifications and accomplishments. He obtained his medical and doctor of philosophy degrees from the University of Pennsylvania at Philadelphia and completed his internship at the Center for Health Sciences at the University of California at Los Angeles (UCLA). He stayed on at UCLA for postdoctoral fellowship and ophthalmology residency training at the Jules Stein Eye Institute, and then finished a fellowship in Medical Retina and Genetics at Moorfields Eye Hospital in London, England.

Dr. Michael Gorin

In 1990, Dr. Gorin began his academic career as Assistant Professor of Ophthalmology and Human Genetics at the University of Pittsburgh School of Medicine. He has the unique distinction of having been an interim chair for both a basic science department (Department of Human Genetics at the Graduate School of Public Health) and a clinical department (Department of Ophthalmology in the School of Medicine) at the University of Pittsburgh. More recently, he served as the Assistant Vice Chancellor for Strategic Initiatives for the University of Pittsburgh Schools of the Health Sciences and Professor of Ophthalmology, Human Genetics and Bioengineering, from which positions he was recruited to the Jules Stein Eye Institute.

Dr. Gorin's primary research focus is in the field of molecular genetics of hereditable eye disorders, specifically in the complex genetics of age-related maculopathy. His research group was the first to identify genetic regions that contribute to macular degeneration, which then led to the identification of several macular degeneration genes by multiple investigators. He also investigates monogenic disorders such as hereditary retinal degenerations, glaucoma, cataracts and ocular syndromes. Other basic research areas include genetic modifiers of disease, neurobiology of pain, and ocular toxicities of systemic medications. Applied research areas include bioinformatics in clinical ophthalmic practice, new diagnostic technologies for retinal disorders, and the use of insurance and health care data to assess clinical practice patterns and public health issues pertaining to ocular disease.

He is the recipient of many honors including election to the Omega Delta Honor Society for Public Health, the Lew R. Wasserman Merit Award and the Senior Scientist Investigator Award from Research to Prevent Blindness. He has published over 100 scientific papers in refereed journals, and is author of five book chapters.

As a full-time faculty member, Dr. Gorin divides his time between patient care for diseases of the retina, research into the genetics of inherited eye disorders and training young ophthalmologists.

It is a great pleasure to welcome Dr. Gorin back to UCLA and to the full-time faculty at the Jules Stein Eye Institute.

JSEI Visiting Fellow Receives Royal Seal of Approval

Former visiting Winston Churchill Trust Fellow Dr. Tuyen Ong received a silver medallion at Buckingham Palace from Her Majesty Queen Elizabeth II on June 6, 2006. In 2004, Dr Ong used his Traveling Fellowship to visit the Jules Stein Eye Institute under the supervision of Professor of Ophthalmology Dr. Marc Yoshizumi, observing ophthalmic surgical procedures performed by glaucoma specialist Dr. Joseph Caprioli and retina specialist Dr. Steven Schwartz. He received the silver medallion in recognition of his achievements.

JSEI Founding Member Retires

Michael O. Hall, PhD, Professor of Ophthalmology in the Vision Sciences Division and Founding Member of the Jules Stein Eye Institute has retired after more than 40 years of service.

Dr. Michael Hall

Dr. Hall began his career at the University of California at Los Angeles (UCLA) after earning his degree in Biochemistry at the University of Natal in South Africa. He earned his doctor of philosophy degree in Physiological Chemistry at UCLA in 1961. He continued at the university first as an Assistant Research Biological Chemist, subsequently as an Assistant Professor of Ophthalmology and Biochemistry, and later as Professor of Ophthalmology and Biochemistry.

Dr. Hall was a founding member of the Jules Stein Eye Institute (1965), and served as Associate Director of the Institute for several years (1971–1972; 1974–1975; 1978–1985). He also chaired or co-chaired numerous research, fellowship training and educational program committees during his many years at the Institute.

Dr. Hall's research has focused on retinal biochemistry, retinal degeneration, cellular interaction and metabolism of retinal pigment epithelium, authoring many papers on these topics. His illustrious career has taken him to various regions of the world; he has been a visiting fellow, professor and lecturer in England, South Africa and Australia.

Jules Stein Eye Institute and UCLA paid tribute to Dr. Hall at a reception in The Adam Room on October 5, 2006. The faculty and staff thank him for his years of service and lasting contributions to vision science. We wish him the best on his well-deserved retirement. *(See retirement reception photos on last page.)*

EYE LINES

UCLA Department of Ophthalmology Association

The UCLA Department of Ophthalmology Association hosted its annual reception at the American Academy of Ophthalmology meeting in Las Vegas, Nevada, on Sunday, November 12, 2006, at the Westin Cuasarina Hotel. Over 150 JSEI faculty members, staff, and resident and fellow alumni from around the world gathered to renew acquaintances and reconnect with old friends.

(Left to right) Drs. Henry Baylis, Rona Silkiss with husband Neil Jacobstein (second from left), Robert Goldberg and Kenneth Steinsapir enjoy the evening's festivities.

UCLA Department of Ophthalmology Association Treasurer Dr. Robert Goldberg (left) greets fellow JSEI faculty member Dr. Marc Yoshizumi.

(Left to right) JSEI Director Dr. Bartly Mondino welcomes JSEI alumnus Dr. David Aizuss and current resident Dr. F. Jacob Khoubian.

(Left to right) Drs. Ronald Mancini, Tanju Nakra and Robert Goldberg test fate with Lady Luck!

Thank you JSEI Alumni and UCLA Department of Ophthalmology Association Members!

The UCLA Department of Ophthalmology Association extends a special thank you to its 2006–07 dues paying members. Annual dues provide the Association with the resources to support the annual Research Grant Awards, JSEI Clinical and Research Seminar, Video Library Project, Alumni Directory, reception at the Annual AAO Meeting and other important alumni events. If you have not yet submitted your dues, registration forms can be requested by contacting us at alumni@jsei.ucla.edu. Thank you!

Paying tribute to Friends & Family

Richard B. Shapiro Vision Fund

For more than 15 years, **Richard B. Shapiro** had been struggling with uveitis, an intraocular inflammatory disease. He stated, "To have your sight threatened is very debilitating. I wanted to find the best place in the world to be treated, and I found that was at the Jules Stein Eye Institute." Meeting with **Gary N. Holland, MD**, Chief of the Cornea and Uveitis Division, and **Anne L. Coleman, MD, PhD**, Professor of Ophthalmology and Epidemiology, Richard was inspired to support their research in this field of medicine. He was particularly impressed by Dr. Holland's thorough explanation of and promising ideas regarding uveitis.

In addition to his own gift, Richard then asked friends, family and colleagues to contribute to the establishment of the "Richard B. Shapiro Vision Fund." He felt that "a grassroots approach would be the most effective plan" to raise the necessary funds to support groundbreaking investigations that would broaden the understanding of uveitis and its complications, such as glaucoma, and ultimately find new treatment options. "This was an easy sell. I just told people about what an incredible place Jules Stein is, and the important work being done to preserve people's sight. The benefits of the scientists' work will not likely change my situation, but it will help others in the future." To date, more than $170,000 has been raised from more than 90 donors, many of whom have given multiple gifts.

Dr. Holland stated, "Through Mr. Shapiro's commitment and dedicated fund-raising efforts, the Shapiro Fund has been established as a permanent endowment that will serve as a continuing source of support for our investigations dealing with uveitis, which can be a particularly devastating eye disease. Income from the Fund has already allowed us to conduct a study that has provided a better understanding of mechanisms that may contribute to the development of glaucoma in uveitis patients. We are grateful to both Richard, his wife **Colleen** and his friends and family who have made generous donations to this important initiative."

In addition to his involvement with the Jules Stein Eye Institute, Richard serves as the Vice Chairman of the Parkinson's Institute in Sunnyvale, California. He also is the Chairman of the California Horse Racing Board to which Governor Schwarzenegger appointed him in 2004. For more than 20 years, he has been active in all aspects of commercial real estate including development, leasing, management and repositioning. Currently, he is the owner of Winco Real Estate Services, Inc., and Chairman of Bridge Capital Finance.

Paul J. Vicari Endowed Cataract Research Fund

Stewart Resnick was looking for an opportunity to honor **Paul J. Vicari**, his good friend and former business partner. Paul suggested a gift to support cataract research under the direction of **Kevin M. Miller, MD**, Professor of Clinical Ophthalmology at UCLA's Jules Stein Eye Institute. In May 2006, Stewart and his wife **Lynda** made a generous one-million dollar donation through the Resnick Family Foundation to establish the Paul J. Vicari Endowed Cataract Research Fund. Paul said he was "proud to be honored by Stewart, especially in an ongoing endeavor to help others." Stewart mentioned that "Paul could have designated this gift anywhere, but he chose the Jules Stein Eye Institute; he is very committed to Dr. Miller's work."

This essential resource will underwrite investigations in cataract surgery and promote scientific breakthroughs in this important field of ophthalmology. Dr. Miller stated, "I am incredibly grateful to both Paul Vicari and the Resnick Family Foundation for their combined efforts to provide a permanent source of funding to support my research in alternative treatments for cataract."

A gift to create an endowment demonstrates a long-term commitment to the Jules Stein Eye Institute, as the fund is maintained in perpetuity. Over the past 40 years, more than 70 endowment funds have been established to support education, research, patient care, and public service programs. These resources are vital to uphold JSEI's mission to preserve sight and prevent blindness.

(Left to right) Dr. Bartly Mondino, Paul Vicari, Stewart Resnick and Dr. Kevin Miller recently attended a lunch at JSEI to thank Mr. Vicari and Mr. Resnick for their involvement in establishing this important endowment.

David Schumacher

The friends and family of **David Schumacher, PhD**, who passed away at 86 on July 26, 2006, honored his legacy with memorial contributions to benefit glaucoma research at the Jules Stein Eye Institute. To date, more than $10,000 has been contributed from 75 donors. **Margaret**, Dr. Schumacher's wife of 29 years, was not surprised at this generosity. "David was a kind and gentle man loved by so many. The tributes to my dear David have been monumental. He would never have believed it."

David Schumacher, PhD

Born in Los Angeles in 1919, David Theodore Schumacher was a real estate giant, author, entrepreneur, scholar and philanthropist. At Pacific Western University, he majored in real estate and earned his PhD. He authored two books, *Buy and Hold: Real Estate Strategy* and more recently, *Buy and Hold: 7 Steps to Real Estate Fortune*, offering practical advice on how to invest and attain financial security. In 1960, Dr. Schumacher began investing in real estate in Hermosa Beach and became one of its largest and most beloved residential landlords.

Born with progressive myopia, Dr. Schumacher had poor eyesight throughout his life. After suffering a detached retina in 1997, he lost sight in his left eye. Then, 10 years ago, after undergoing trabeculectomy surgery to control pressure in his right eye and minimize the effects of glaucoma, the vision in his right eye failed. Despite this major setback, Dr. Schumacher never lost faith and continued to relish each and every day.

Margaret and David Schumacher took an active part in the "Impaired Vision" group at their retirement facility in Aliso Viejo. The members thought of it as a way to support each other, discuss their needs, and keep abreast of the latest vision research. The Schumachers led a rich life, traveling around the world and enjoying time with their family and friends. Dr. Schumacher will be greatly missed by all those who knew him.

If you are interested in honoring a loved one with a tribute or memorial donation, please call the JSEI Development Office at (310) 206-6035.

If you would like to make a contribution to the Institute, you may do so by means of the remittance envelope included in this issue of EYE. *For additional information, please call or write to the following:*

Development Office
Jules Stein Eye Institute
100 Stein Plaza, UCLA
Box 957000
Los Angeles, California
90095–7000
(310) 206-6035
giving@jsei.ucla.edu

Community Outreach

JSEI Affiliates Hosts Holiday Volunteer Recognition Luncheon

Marti Oppenheimer and **Cherie Hubbell**, Co-Chairs of the JSEI Affiliates, hosted a festive holiday luncheon on Monday, December 11, 2006, at the Hotel Bel-Air honoring the JSEI Affiliates Advisory Board members, volunteers and special guests.

"The strength of the JSEI Affiliates programs depends on our dedicated volunteers whom we recognize at this special annual recognition event," Ms. Hubbell remarked. "The Affiliates accomplished new levels this year in each of our community outreach programs, results that would not have been possible without the commitment of our advisory board and dedication of our volunteers."

Educating children about one of their most precious assets—their eyes—the Affiliates offer the *Vision In-School* program and *Preschool Vision Screenings* free of charge to elementary schools and preschools in the community. The Affiliates also support several patient programs including the *Make Surgery Bearable* and *Shared Vision* programs.

If you would like more information about joining or volunteering with the Jules Stein Eye Institute Affiliates, please contact us at (310) 825-4148.

Affiliates President Cherie Hubbell welcomes volunteers Dr. Jule Lamm and Dr. Alex Yuan

JSEI Affiliates member Gloria Jurisic (left) and Affiliates Advisory Board member Tracey Tatkin

Vision IN-School Volunteers (left to right) Roxanna Radu, Sheryll Mangahas and Dr. Ned Van Eps

Affiliates Advisory Board members and volunteers Linda Valliant (left) and Maude Feil

Academic News & Views

UCLA/AUPO Introductory Course on Clinical Research

As a function of the JSEI Clinical Research Center, **Gary N. Holland, MD**, Chief of the Cornea and Uveitis Division, and **Bartly J. Mondino, MD**, Director of the Jules Stein Eye Institute and Chairman of the UCLA Department of Ophthalmology, organized an "Introduction to Clinical Research" course at UCLA from September 15–17, 2006. The course was co-sponsored by the Association of University Professors of Ophthalmology (AUPO) and endorsed by the Association for Research in Vision and Ophthalmology (ARVO). Designed to assist new investigators who are beginning their academic careers and to help physicians read and interpret scientific literature more critically, the course offered a comprehensive overview of research methods, interpretation of statistical tests, regulatory issues and manuscript preparation. It was attended by ophthalmology residents, clinical fellows, and junior faculty from across the nation and involved instructors from various UCLA departments, as well as guest speakers from other institutions.

"Introduction to Clinical Research" course participants gather on the front steps of the Jules Stein Eye Institute.

Graves' Disease International Symposium

The Graves' Disease International Symposium was held at the Jules Stein Eye Institute on November 17–18, 2006. The symposium attracted participants with diverse areas of expertise including Graves' disease, endocrinology, orbital disease and autoimmune research, and encouraged active audience participation in current disease concepts, research and disease management. The focus of the meeting was to formulate a Consensus Statement regarding future clinical and translation research of Graves' disease. Through small group discussions, participants outlined disease diagnostic and longitudinal parameters, potential immunomodulatory therapies, improvements to existing therapies, and novel medical and surgical treatments. The Consensus Statement will provide a guide for multi-center clinical trial investigations. The meeting also facilitated participant enrollment in multi-center trials though a private listserv, website and IRB assistance.

Course Directors:

Raymond S. Douglas, MD, PhD
Robert Alan Goldberg, MD
Terry J. Smith, MD

Special Events & Activities

Retirement Reception

On Thursday, October 5, 2006, the Jules Stein Eye Institute paid tribute to retiring professor of ophthalmology, **Michael O. Hall, PhD**. Friends and faculty members gathered in The Adam Room to recognize Dr. Hall's contributions to vision science and to reminisce about his personal and professional milestones. JSEI faculty and staff extend their best wishes to Dr. Hall and his wife, Jill, for a happy retirement. (See article on fifth page.)

Dr. Michael Hall and his wife Jill enjoy the festivities at the retirement reception.

(Left to right) Dr. Bradley Straatsma, Founding Director of the Jules Stein Eye Institute, Gerald Oppenheimer, JSEI Trustee, and Norman Abrams, Acting Chancellor of UCLA, were among those present to pay tribute to Dr. Hall.

Dr. Bartly Mondino presents Ms. Jill Hall with a token of appreciation in recognition of her husband's many years of contribution to vision science and the Jules Stein Eye Institute.

Important JSEI Phone Numbers

Patient Care	
JSEI Ophthalmology Referral Service	(310) 825-5000
JSEI Ophthalmology Emergency Service	(310) 825-3090
after hours	(310) 825-2111
JSEI Specialty Areas:	
Aesthetic Eye & Facial Surgery	(310) 794-9341
Contact Lens Service	(310) 206-6351
Cornea and Uveitis	(310) 206-7202
Glaucoma	(310) 794-9442
Neuro-Ophthalmology	(310) 825-4344
Pediatric Ophthalmology & Strabismus	(310) 825-5000
Refractive Surgery (Custom LASIK)	(310) 825-2737
Retina	(310) 825-5000
Fund Raising	
JSEI Development Office	(310) 206-6035
JSEI Affiliates	(310) 825-4148

Special Thanks to Dr. Teddy Holiday Donors!

The JSEI Affiliates thank the many donors who contributed to its annual *Make Surgery Bearable* Holiday Sponsorship Campaign. The winter campaign raised funds to sponsor over 150 Dr. Teddy MD teddy bears for pediatric surgery patients at the Jules Stein Eye Institute. Dr. Teddy sponsorships can be submitted year round in honor or memory of a loved one, or to celebrate anniversaries or birthdays. Contact the JSEI Affiilates at (310) 825-4148 or www.jseiaffiliates.com for further information.

EYE

Jules Stein Eye Institute
100 Stein Plaza, UCLA
Box 957000
Los Angeles, California, 90095-7000
U.S.A.