

EYE

J U L E S S T E I N E Y E I N S T I T U T E

What's New in Glaucoma Research

Although three million Americans have glaucoma, only half of them are aware they have this potentially devastating eye disease. Because it is symptomless in the early stages, glaucoma has become the second leading cause of blindness in the United States. Most of this blindness could be prevented through comprehensive ophthalmic exams, which can detect glaucoma before vision loss occurs. This is especially crucial for seniors, anyone with a family history of the disease, and African Americans over 45 years of age. These groups are most at risk. Once ophthalmologists have diagnosed glaucoma, they can initiate treatment in the form of eye drops and/or surgery, which can forestall or slow loss of vision. Unfortunately, sight cannot be recaptured and treatment is lifelong, as at this time, glaucoma is not curable.

The loss of sight associated with glaucoma begins with the loss of peripheral vision. As the disease progresses, central vision becomes increasingly impaired until blindness occurs. This vision loss is a result of irreversible damage to the optic nerve, very often caused by intraocular pressure. Normally, fluid flows in and out of a space in the front of the eye called the anterior chamber, nourishing tissues. The pressure created by this process naturally varies throughout the day and everyone has different pressure levels. If the flow of fluid out of the chamber is slowed or stopped, usually because of a structural problem in the eye, the fluid builds up, increasing pressure inside the eye and causing progressive damage to the optic nerve. To complicate matters, not everyone with high intraocular pressure will develop glaucoma, although it is considered to be a precursor to the disease, and some people can have glaucoma without the attendant high pressure.

New Treatment Approaches

Joseph Caprioli, MD, Frances and Ray Stark Professor of Ophthalmology and Chief of the Glaucoma Division, is leading the search for new approaches to this disease at the Jules Stein Eye Institute. In a long-range National Eye Institute (NEI) study, he is attempting to develop new measures that are more sensitive and specific than traditional tests for detecting early and progressive glaucomatous optic nerve damage. Techniques that he and his colleagues are evaluating include highly specialized photography and laser imaging of the optic nerve. Says Dr. Caprioli, "Preliminary results show that no one imaging method is superior, however a combination of (imaging) methods can significantly improve the clinician's ability to distinguish normal eyes from those with early glaucoma."

Also being explored is a new treatment option. In a clinical study sponsored by Allergan Pharmaceutical Company, Dr. Caprioli is

The loss of sight associated with glaucoma begins with the loss of peripheral vision. As the disease progresses, central vision becomes increasingly impaired until blindness occurs.



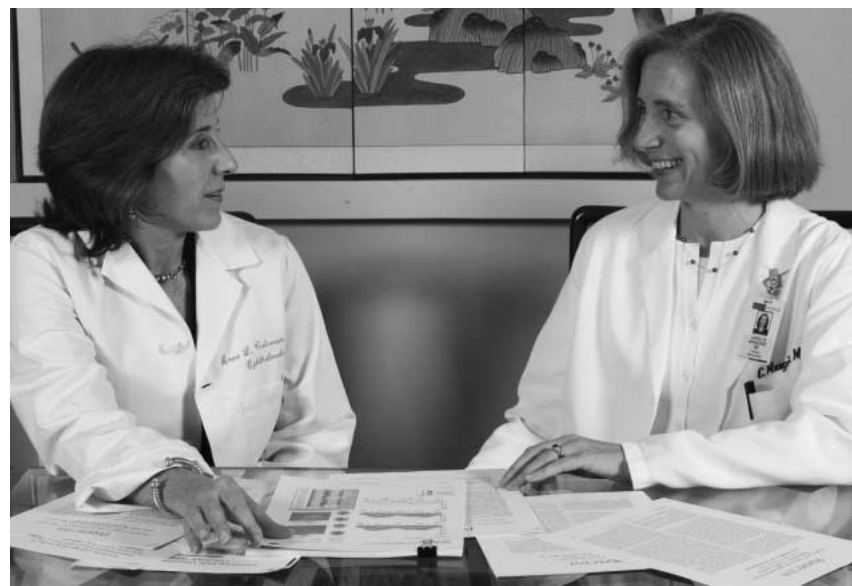
In both clinical and laboratory settings, neuroprotective therapies are being studied as potential new tools in the fight to preserve vision for glaucoma patients. From left, Drs. Joseph Caprioli, Jacky Kwong and Natik Piri are conducting these studies at JSEI.



evaluating a therapy called neuroprotection, which is intended to protect the optic nerve from the effects of high intraocular pressure. The neuroprotective agent is an experimental drug called memantine, which is administered orally. This is a radically different approach to glaucoma. Standard treatments—drops and surgery—attempt to avoid optic nerve damage by lowering eye pressure. If proven effective, neuroprotection may be used alone or in conjunction with standard therapies.

Evaluating the Standard of Care

Simon K. Law, MD, PharmD, Assistant Professor of Ophthalmology, is conducting glaucoma studies that are comparing standard treatment approaches used by community ophthalmologists. In a collaborative effort, Dr. Law and **Ervin Fang, MD**, a glaucoma specialist in the Southern California Permanente Medical Group (Kaiser), are comparing the benefits of two prostaglandin drugs (bimatoprost and latanoprost), which are widely used. Both eye drops have been proven effective in lowering intraocular pressure. However, one is available in a larger package, does not need refrigeration, and has a cost differential—important factors for a large health maintenance organization. Drs. Law and Fang will analyze the medical records of 46,000 patients who are using the two eye drops at Kaiser Permanente medical centers in California to determine if either drug has a superior outcome. Says Dr. Law, “Medication is usually the first step in treating glaucoma so knowing how patients tolerate specific drugs and how effective they are is important. This will be a large-scale study to compare these two drugs, which really serve as the first line of defense for glaucoma treatment.”



In an epidemiological study funded by the National Institute on Aging, Drs. Anne Coleman (left) and Carol Mangione are trying to determine if the vision loss caused by glaucoma contributes to increased risk of falling.

glaucoma, only half that number progressed if they were treated. This outcome suggests changes in the standard of care. Says Dr. Coleman, “Glaucoma is a difficult disease to diagnose, and ophthalmologists do not want to prescribe drugs unnecessarily. This study shows that early treatment of ocular hypertension is beneficial.” Patients in the study who were not treated are now being offered appropriate care, and Drs. Coleman and Baker are evaluating the benefits of initiating treatment in these later stages.

Dr. Coleman is directing another epidemiological study that is evaluating the role that vision loss plays in osteoporotic fractures caused by falls. This study, funded by the National Institute on Aging, is intended to address the consequences to society, including the financial costs, of osteoporotic fractures, in particular hip fractures. In a previous study, it was determined that decreased depth perception and contrast sensitivity caused by eye diseases contribute to increased risk of falling. Dr. Coleman and **Carol M. Mangione, MD, MPH**, Professor of Medicine, are trying to determine if glaucoma is one of the eye diseases contributing to this increased risk.

Vision Science Research

Vision science research into glaucoma at JSEI is focused on understanding the mechanism of glaucomatous optic nerve damage and identifying novel neuroprotective therapies that may intervene in this process. It has been shown that retinal ganglion cell death due to glaucoma occurs as a result of progressive damage to the optic nerve. Once retinal cells have died, vision loss occurs. An understanding of this process and the potential opportunities to prevent it are critical because retinal cells cannot be regenerated. Dr. Caprioli directs vision science research in the Glaucoma Division. He is working closely with **Jacky M.K. Kwong, PhD**, Assistant Researcher of Ophthalmology, investigating the potential of several naturally occurring substances, including heat shock proteins, that may play a protective role in neuronal injury. Also in the Glaucoma Division **Natik Piri, PhD**, Assistant Professor of Ophthalmology, is studying known cell death factors, using molecular biology, biochemical, and immunological techniques, in order to enhance an understanding of retinal ganglion cell death. Dr. Piri is also working on the identification of new genes specific to this process so that molecular targets can be developed for future therapies employing neuroprotective agents.

At JSEI, the efforts to improve treatment and quality of life for glaucoma patients are multi-faceted. Research ranges from improving existing therapies to developing new ones; and from increasing our understanding of the social consequences of the disease to creating an understanding of its underlying biology and the potential for molecular intervention. With this diversity of effort, the physicians and scientists in the Glaucoma Division are working toward a common goal, to save sight.

In a large-scale, collaborative project with Kaiser Permanente, Dr. Simon Law is comparing the benefits of two eye drops that are widely used for glaucoma patients.



Dr. Law has also been comparing the surgical outcomes of the Ahmed and Baerveldt shunts, which are routinely used by ophthalmologists to drain fluid from the eyes. Once implanted, these shunts are effective as long-term treatments. In a recently published article in the *Journal of Glaucoma*, Dr. Law, along with Drs. Caprioli and Coleman, determined that there are no significant differences in outcomes of the Ahmed Valve and Baerveldt-350 Implant, although they are made of different materials. Dr. Law and colleagues are currently conducting follow-up studies.

Epidemiological Studies

Anne L. Coleman, MD, PhD, Associate Professor of Ophthalmology and Epidemiology, devotes much of her research to understanding the epidemiological and social implications of eye diseases, especially glaucoma. She is the principal investigator in a long-term, multi-center study funded by the NEI on ocular hypertension, a condition that is defined by chronically high intraocular pressure. The study is a collaboration with **Richard S. Baker, MD**, Associate Professor of Ophthalmology at Charles R. Drew University of Medicine and Science, and it is being conducted at King/Drew Medical Center. In the initial phase of the study, patients who were treated for ocular hypertension were compared with patients who were not treated. Results showed that while 10 percent of patients naturally progressed to

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AESTHETIC EYELID AND FACIAL REJUVENATION COURSE

The Aesthetic Eyelid and Facial Rejuvenation course was held at the Pala Mesa Resort in Fallbrook, California, February 6–8, 2004, under the auspices of the JSEI Orbital and Ophthalmic Plastic Surgery Division. This course, which combines video presentations and didactic lectures, draws ophthalmologists from around the world to learn about the latest advances in aesthetic and reconstructive surgery of the eyelids and face, many of which have been pioneered at the Jules Stein Eye Institute. The annual Robert Axelrod, MD, Memorial Lecture was given by fellowship alumnus **Stuart R. Seiff, MD**.

Course Directors:

John D. McCann, MD, PhD
Robert Alan Goldberg, MD
Norman Shorr, MD

Robert Axelrod, MD
Memorial Lecturer

Stuart R. Seiff, MD



Dr. Stuart Seiff presents the Robert Axelrod, MD, Memorial Lecture

Course Speakers

Henry I. Baylis, MD
Guy Ben-Simon, MD
Raymond Douglas, MD
Michael J. Groth, MD
Jonathan A. Hoening, MD
Naresh Joshi, MD

Jerome R. Klein, MD
Gary P. Lask, MD
Tina Li, MD
Rona Z. Silkiss, MD
Kenneth D. Steinsapir, MD
Robert Schwarcz, MD



Course Faculty Members (left to right) Drs. Robert Goldberg, Stuart Seiff, Norman Shorr, Rona Silkiss, Jerome Klein, John McCann, Jonathan Hoening, Naresh Joshi, Raymond Douglas, and Robert Schwarcz

NEW OPHTHALMOLOGY FELLOWS

We are pleased to introduce the following ophthalmologists entering clinical and international fellowships at the Jules Stein Eye Institute in the 2004–2005 academic year.

Clinical Fellows

Richard W. Bryant, MD
orbital and ophthalmic plastic surgery

Kimberly D. Davis, MD
glaucoma

David A. Hollander, MD
cornea-external ocular disease and refractive surgery

Julie A. King, MD
cornea-external ocular disease and refractive surgery

Joanna D. Lumba, MD
glaucoma

Charles W. Mango, MD
vitreoretinal diseases and surgery

Scott C. So, MD
glaucoma

Robert S. Wirthlin, MD
vitreoretinal diseases and surgery

International Fellows

Manisha K. Bhide, MD
pediatric ophthalmology and strabismus research from India

Hector J. Fontana, MD
glaucoma research from Argentina

Setsuko Hashida, MD
cornea-external ocular disease and refractive surgery research from Japan

Nam-Yeo Kang, MD
pediatric ophthalmology and strabismus research from Korea

Hui-Chuan Kau, MD
pediatric ophthalmology and strabismus research from Taiwan

Anita Manassakorn, MD
glaucoma research from Thailand

Pawan Prashar, MD
ophthalmic pathology research from India

Apiriadi Prechanond, MD
cornea-external ocular disease and refractive surgery research from Thailand

Alejandra S. Tartara, MD
uveitis and inflammatory eye disease research from Argentina

Akihiro Yasuda, MD
cornea-external ocular disease and refractive surgery research from Japan

Vision Science Research Fellows

We are pleased to present the following predoctoral and postdoctoral research fellows in the vision sciences who are currently receiving training at the Jules Stein Eye Institute.

Predocctoral Fellows

Jason Clevenger
with Dr. Arthur L. Rosenbaum

Mark R. Fleissner
with Dr. Wayne L. Hubbell

Evan Hsieh
with Dr. Xian-Jie Yang

John McCoy
with Dr. Wayne L. Hubbell

Shawn Morales
with Dr. Lynn K. Gordon

Kun Do Rhee
with Dr. Xian-Jie Yang

Mehrnoosh Saghizadeh
with Dr. Debora B. Farber

Robin L. Seitzman
with Dr. Anne L. Coleman

Zoe Verney
with Dr. Xian-Jie Yang

Arthi Vijayaraghavan
with Dr. Joseph L. Demer

Postdoctoral Fellows

Ling Chen, PhD
with Dr. Lynn K. Gordon

Robert Clipsham, PhD, DVM
with Dr. Debora B. Farber

R.K. Gangalum, PhD
with Dr. Suraj P. Bhat

Takao Hashimoto, MD, PhD
with Dr. Xian-Jie Yang

Ming Hao Jin, PhD
with Dr. Gabriel H. Travis

Guy Jirawuthiworavong, MD
with Dr. Lynn K. Gordon

Katherine H. Kaschula, PhD
with Dr. Gabriel H. Travis

Eiko Kitamura, PhD
with Dr. Debora B. Farber

Myong B. Koag, PhD
with Dr. Gabriel H. Travis

Kim Phan, PhD
with Dr. Joseph Horwitz

Roxana A. Radu, MD
with Dr. Gabriel H. Travis

Kiyo Sakagami, PhD
with Dr. Xian-Jie Yang

John Sinclair, PhD
with Dr. Nicholas C. Brecha

T. Somasundaram, PhD
with Dr. Suraj P. Bhat

John D. Stamm, PhD
with Dr. Wayne L. Hubbell

Ned C. Van Eps, PhD
with Dr. Wayne L. Hubbell

Vivekneil Yellore, PhD
with Dr. Anthony J. Aldave

Lawrence Yoo
with Dr. Joseph L. Demer

RESIDENCY MATCH

The process of selecting JSEI ophthalmology residents takes place in the fall of each year for residents who will be entering the program a year and a half later. The four-month process includes the review of over 300 applications, the selection of 50 applicants to be interviewed, and a final meeting where the applicants are ranked in order of preference. This rank order list is submitted to the nationwide Ophthalmology Match Program where it is compared to the participating medical students' preferences. When both the student and ophthalmology program rank each other at the same level, a "match" has occurred and a new resident is then contracted to join the program.

In late January of last year, Residency Selection Chairman **Robert Alan Goldberg, MD**, was informed of the results of the ophthalmology residency match for 2004. The following applicants, selected over a year ago, will serve as Jules Stein Eye Institute House Officers beginning July 1, 2004.

Louis K. Chang, MD
Washington University
Saint Louis, Missouri

Hajir Dadgostar, MD, PhD
University of California,
Los Angeles
Los Angeles, California

David T. Goldenberg, MD
University of California,
Los Angeles
Los Angeles, California

Peter J. Kappel, MD
University of California, Irvine
Irvine, California

Patty Lin, MD
Tufts University
Boston, Massachusetts

Eddy V. Nguyen, MD
Stanford University
Palo Alto, California

Tien An Y. Shih, MD, PhD
Cornell University
New York, New York

VISION SCIENCE

DR. YANG'S STUDY OF RETINAL DEVELOPMENT AND DISEASES

For a developmental biologist this is a fascinating time in biological research," says **Xian-Jie Yang, PhD**, Associate Professor of Ophthalmology. "We now know the entire sequence of the human genome," she says, "but we're just beginning to learn how living organisms are formed under this blue print."

Before coming to the Jules Stein Eye Institute in 1996, Dr. Yang, who studies molecular mechanisms underlying development of the vertebrate eye, pursued basic scientific questions with little thought about their implications for addressing diseases leading to blindness. But being part of a clinical department has influenced the way she thinks about research in retinal development, she says. It has also led her into a collaboration in which she is developing a gene therapy approach for the degenerative retinal disorder Usher 1B syndrome, a major subtype of retinitis pigmentosa (RP).

Dr. Yang's interest in vertebrate retinal development dates to 1989, when she began her postdoctoral fellowship at Harvard University. Now in her lab at JSEI, she seeks to better understand the retinal primordium (the beginnings of vision cells), and how specific cells (progenitor cells) that proliferate with the potential to become a variety of cell types make cell-fate choices during formation of the retina.

In exploring this mystery, her research group has been studying two classes of molecules: transcription factors, which control the "on/off switch" for genes; and growth factors, which affect the behaviors of cells. "Ultimately, we want to know how we can

influence naive stem cells to become certain desired cell types," Dr. Yang says. "If someone has a disease where there is photoreceptor cell loss or ganglion cell damage, can we learn how to regenerate these cell types?"

Recently her lab has homed in on two signaling molecules called Sonic hedgehog and vascular endothelial growth factor that influence the behavior of progenitor cells. Dr. Yang has determined that both of these molecules are produced by differentiated

retinal neurons and influence uncommitted progenitor cells. Dr. Yang is also studying another growth factor called ciliary neurotrophic factor, which has been shown to rescue photoreceptor cells in animal models of retinal degeneration. This research is aimed at understanding how this neurotrophic factor regulates photoreceptor and glial cell differentiation in the retina.

Two years ago, Dr. Yang began to pursue another research direction. With **David S. Williams, PhD**, of UC San Diego, she has been developing a gene therapy approach for degenerative retinal diseases, starting with Usher 1B syndrome, a form of retinitis pigmentosa (RP) that causes sufferers to become both blind and deaf.

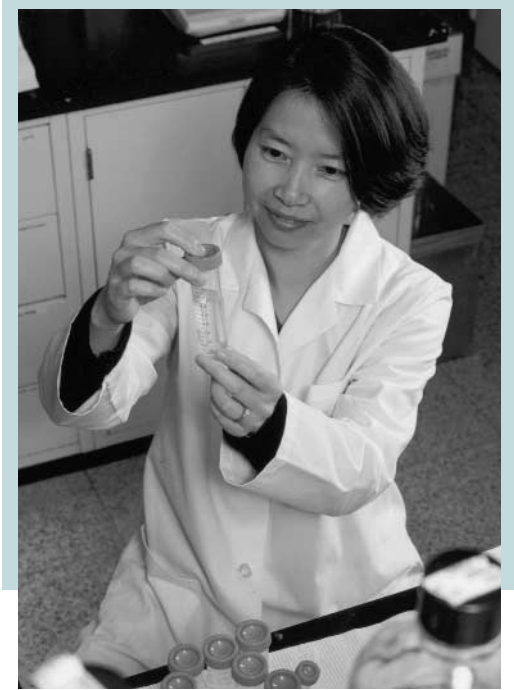
"Usher 1 patients are born deaf, and then gradually develop blindness beginning in their teenage years," Dr. Yang explains. "It's tragic because many of these kids have learned sign language and adapted well to their deafness. Then they find out that they have Usher, and will be losing their sight as well."

The syndrome results from mutations in the myosin VIIa gene, which is believed to play a role in the function of the photoreceptor (PR) and retinal pigment epithelial (RPE) cells that affect vision.

With funding from The Foundation Fighting Blindness and the National Eye Institute, Drs. Yang and Williams are developing a way to deliver a normal myosin VIIa gene into PR and RPE cells. They have engineered a type of virus that they are using in experiments to introduce the gene in a mouse model of the disease, in the hope that it will specifically target these retinal cells and be expressed at appropriate levels within them, preventing the disorder.

While both of her research directions have the potential for improving people's lives by addressing retinal diseases, Dr. Yang wasn't thinking about specific clinical problems when she began studying developmental biology at Harvard. "I've always been attracted to this type of science because it's so interesting and challenging," she says. "Fundamentally, we all carry the same sets of genes. How do we go from this very similar genetic material to the complex individuals we become?"

Though her intellectual curiosity remains as strong as ever, Dr. Yang explains that she is now thinking more about where her research might lead. "Earlier in my career, I characterized my research as 'retinal development,'" she says. "Now, I tell people it's 'retinal development and disease.' Working in a leading eye institute, you can't help but learn about eye diseases and what patients suffer. As a basic scientist, I can use my expertise to help facilitate high-quality research with clinical implications. It's gratifying to know that what you're pursuing in the laboratory could eventually do so much to improve people's lives."



Dr. Xian-Jie Yang

"Working in a leading eye institute, you can't help but learn about eye diseases and what patients suffer. . . . It's gratifying to know that what you're pursuing in the laboratory could eventually do so much to improve people's lives."

RESIDENCY TRAINING SPONSORED BY PFIZER

Residents from the Jules Stein Eye Institute and neighboring Doheny Eye Institute traveled to Peapack, New Jersey, on March 26, 2004, to receive hands-on ophthalmic surgical training at the Pfizer Ophthalmology Training Center. The residents were accompanied by **William L. Trotter, MD**, former comprehensive ophthalmology fellow and current volunteer faculty member, who led the day-long session. A didactic presentation was followed by hands-on instruction of advanced phacoemulsification techniques (the use of ultrasonic vibration to break up cataracts) in the wet lab. The unique facilities, built by Pfizer pharmaceutical company, encompass top-of-the-line phacoemulsification machines, the latest technology in microscopes, and fully networked multimedia to allow the instructor to interact with more than one student at a time. **Kevin M. Miller, MD**, Professor of Ophthalmology, who was instrumental in securing the funding for this unique educational experience, will travel to the training facility later this year with another group of JSEI residents.



JSEI residents Drs. Amani Fawzi and Michael Roberts take full advantage of the state of the art equipment in the Pfizer lab.

NEW RESEARCH CONTRACTS AND GRANTS AWARDED TO INSTITUTE FACULTY

The National Eye Institute has renewed JSEI's Core Grant for Vision Research, under the direction of **Wayne L. Hubbell, PhD**, Jules Stein Professor of Ophthalmology and Co-Chief of the Vision Science Division. The grant provides the Institute's laboratories with shared support functions that comprise a critical infrastructure for vision science investigators. Sixteen faculty members who conduct basic science research are the current beneficiaries of this important grant, which has been awarded to the Jules Stein Eye Institute consistently since 1966.

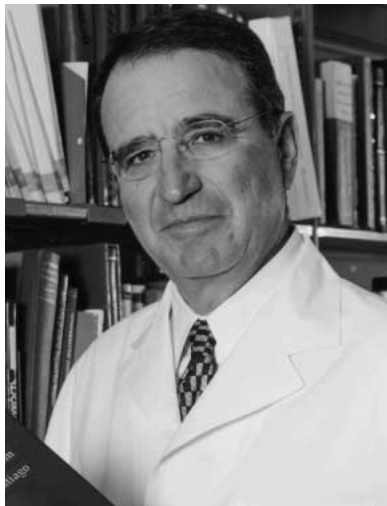
In a collaborative effort, **Simon K. Law, MD, PharmD**, Assistant Professor of Ophthalmology at the Jules Stein Eye Institute, and **Ervin Fang, MD**, a glaucoma specialist in the Southern California Permanente Medical Group (Kaiser), are conducting a clinical study to compare two widely used prostaglandin drugs (bimatoprost and latanoprost) for the treatment of glaucoma. The study is supported by Allergan pharmaceutical company and Southern California Permanente Medical Group.

Kent W. Small, MD, Professor of Ophthalmology, has initiated a major clinical study for "wet" aged-related macular degeneration (AMD), funded by Genentech pharmaceutical company. "Wet" AMD is a particularly aggressive form of the disease, characterized by the growth of abnormal blood vessels in the eye that break and bleed, causing potentially devastating vision loss. The three-year study will compare the efficacy of a new drug manufactured by Genentech pharmaceutical company, called Lucentis™, with the current standard of care (photodynamic therapy).

RESEARCH TO PREVENT BLINDNESS AWARDS

Jules Stein Eye Institute is pleased to announce the receipt of two prestigious grants from Research to Prevent Blindness (RPB), the world's leading voluntary organization supporting eye research.

Arthur L. Rosenbaum, MD, Professor of Ophthalmology and Chief of the Pediatric Ophthalmology and Strabismus Division, was honored with an RPB Physician-Scientist Award. This grant is designed to provide greater opportunities for physicians at medical institutions in the United States to conduct clinical eye research activities that have direct application to the human condition. Dr. Rosenbaum will use the grant to explore ways to stimulate eye muscles that are involved in certain kinds of strabismus disorders, including paralytic strabismus and Duane's syndrome.



Dr. Arthur Rosenbaum

An RPB Medical Student Eye Research Fellowship was awarded to **A. Brock Roller** to support his laboratory research into proteins involved in the structural and functional defects of photoreceptor cells that cause retinitis pigmentosa (RP), a blinding eye disease. Roller has taken off a year from medical school to study and work at the Jules Stein Eye Institute under the supervision of **Gabriel H. Travis, MD**, Charles and Kenneth Feldman Professor of Ophthalmology.

Since its founding in 1960 by Dr. Jules Stein, Research to Prevent Blindness has channeled hundreds of millions of dollars to medical institutions in the United States for research into the causes, treatment, and prevention of blinding eye diseases.

DISTINGUISHED VISITORS

The JSEI Ocular Inflammatory Disease Center hosted three distinguished visitors in March, who gave lectures and worked with Institute faculty on collaborative research. **Justine R. Smith, MBBS, PhD**, is Assistant Professor of Ophthalmology at the Casey Eye Institute, Oregon Health and Science University; **Michael E. Grigg, PhD**, is Assistant Professor of Infectious Diseases at the University of British Columbia; and **Russell N. Van Gelder, MD, PhD**, is Associate Professor of Ophthalmology at the Washington University in St. Louis.



Pictured from left are Drs. Ralph Levinson, Michael Grigg, Russell Van Gelder, Lynn Gordon, Justine Smith, and Gary Holland.

FACULTY HONORS

The 2004 Bruker Prize from the Electron Spin Resonance (ESR) Group of the Royal Society of Chemistry was presented to **Wayne L. Hubbell, PhD**, Jules Stein Professor of Ophthalmology and Co-Chief of the Vision Science Division, for his outstanding contributions to the field. His work includes development of site-directed spin labeling (SDSL), a powerful tool for the study of protein structure and dynamics; and research on light-activated rhodopsin, the visual pigment in photoreceptor cells of the retina.

Arthur L. Rosenbaum, MD, Professor of Ophthalmology and Chief of the Pediatric Ophthalmology and Strabismus Division, gave the prestigious Costenbader Lecture at the annual meeting of the American Association of Pediatric Ophthalmology and Strabismus (AAPOS). The lecture is one of the highest honors in the field, memorializing Frank D. Costenbader, MD, a renowned strabismologist and founder of pediatric ophthalmology. Dr. Rosenbaum gave the lecture on rectus muscle transposition surgery, one of several surgical techniques that he has pioneered.

Professor Emeritus of Ophthalmology and Founding Director of the Jules Stein Eye Institute **Bradley R. Straatsma, MD, JD**, received the Gold José Rizal Medal, the highest award of the Asia-Pacific Academy of Ophthalmology, for excellence in contributions to ophthalmology in Asia. The award honors the memory of José Rizal (1861–1896), ophthalmologist, author and a national hero of Philippine independence.



Dr. Bradley Straatsma received the distinguished Gold José Rizal Medal for his contributions to ophthalmology in Asia.



EYE LINES

UCLA Department of Ophthalmology Association

Dr. Polly Quiram Receives Alumni Research Award

We are pleased to announce **Polly A. Quiram, MD, PhD**, as the recipient of the 2004 UCLA Department of Ophthalmology Association Research Award, given annually to an outstanding resident or fellow. Dr. Quiram's project is entitled "Determination of *rd5* Function Using a Tetracycline-Inducible *rd5* Null-Phenotype." Mutations of the *rd5* or retinal degeneration slow gene, are linked to blinding eye diseases such as retinitis pigmentosa.



Dr. Polly Quiram

According to Dr. Quiram, inherited retinal dystrophies are a group of eye diseases that cause blindness. One such retinal dystrophy, retinitis pigmentosa, is linked to mutations in the human *rd5* gene, which result in abnormal photoreceptor outer segments. The objective of the project is to gain insight into the function of the *rd5* gene by using a system to "switch off" the production of *rd5* in mice by using a tetracycline-inducible system.

Dr. Quiram earned her medical degree and doctorate from the Mayo Medical School in Rochester, Minnesota, and is currently completing her residency in ophthalmology at the Jules Stein Eye Institute.

EDITH AND LEW WASSERMAN ENDOWED CHAIR IN OPHTHALMOLOGY

As a uniquely qualified physician and scientist, **Ben J. Glasgow, MD**, Professor of Pathology and Laboratory Medicine and of Ophthalmology, and Chief of the Ophthalmic Pathology Division, has helped create a discipline that plays a central role in the study and practice of ophthalmology. His contributions and ongoing scholarship have been recognized with an appointment to the Edith and Lew Wasserman Endowed Chair in Ophthalmology.

Dr. Glasgow attended medical school at Johns Hopkins University and completed an internship in internal medicine at the University Hospital, University of California, San Diego. He began his anatomic pathology training at the University of Toronto and completed residency in both anatomic and clinical pathology at UCLA. This was followed by an ophthalmology residency and an eye pathology fellowship at JSEI. He earned several awards during his training, including the Henry



Dr. Ben Glasgow

and Lillian Nesburn Resident Research Award from the Los Angeles Society of Ophthalmology. He was appointed to the UCLA faculty in 1991.

The National Eye Institute has provided major funding for Dr. Glasgow's research since 1996. He is studying protein in the mechanisms of tear film formation and tear lipophilin. His laboratory has developed methods applicable for studying the structure of proteins in solution.

Dr. Glasgow has extensive publications in both pathology and ophthalmology journals that have contributed to the field of ophthalmic pathology. He received the American Academy of Ophthalmology Achievement Award in 2003.

The Wasserman Chair was established in 1977 with a generous gift from Edie and Lew Wasserman, to honor Dr. Jules Stein, and to support and enhance teaching, research, and patient care. Manfred Spitznas, MD, was the first to be appointed to the Wasserman Chair, followed by JSEI Director, Bartly Mondino, MD, from 1988 to 2000.

"Lew and Edie's philanthropy has been instrumental in enabling the Institute to create revolutionary new programs that will dramatically change the way eye disease is treated for generations to come. Their dedication continues to uphold the promise of vision science, as reflected in this distinguished professorship and Dr. Glasgow's appointment."

— JSEI Director Bartly J. Mondino, MD.

HAROLD AND PAULINE PRICE IN MEMORIAM

Along with family and friends, the faculty and staff of the Jules Stein Eye Institute mourn the passing of Harold Price, on January 27, 2004, and his wife Pauline, on April 19.

Harold and Pauline were loyal supporters of the Jules Stein Eye Institute, with more than thirty years of dedication and friendship. Through the Louis and Harold Price Foundation, they created The Harold and Pauline Price Endowed Chair and the Price Retina Research Fund.

The Price Foundation was established in 1951 through the generosity of Harold and his father, Louis Price. The senior Price was a founding partner of the Joe Lowe Corporation, a bakery and ice cream supply business famous for the promotion of the Popsicle.

After graduating from the University of Pennsylvania's Wharton School of Business in 1928 with a bachelor's degree in economics, Harold went to work for his father. He worked in many departments of the corporation and rose through the ranks to the position of Executive Vice President. By 1938, he had formed a successful subsidiary called Cottage Donuts, which at its peak sold 100,000 dozen doughnuts a day, produced at 19 plants throughout the United States. In 1965, Harold was responsible for the successful merger of the Joe Lowe Corporation with Consolidated Foods Corporation, now known as Sara Lee.

Pauline, who shared 69 years of marriage with Harold, showed her generous public spirit through volunteer work during World War II, and as a volunteer for many years at the Veterans



Harold and Pauline Price

Administration Medical Center in Los Angeles. Her charity work also included exemplary service on behalf of the Concern Foundation, to support cancer research.

Through the Price Foundation, Harold and Pauline established the Price Institute for Entrepreneurial Studies in 1979. With the objective of using Harold's business experience to further an understanding of the entrepreneurial process, the Price Institute stimulated MBA programs and curricula to encourage and support students with entrepreneurial aspirations.

With the mission to change the way business education is conducted in the university system, the Price Foundation donated more than \$15.5 million to entrepreneurship education. At UCLA, this philanthropy founded the Harold Price Center for Entrepreneurial Studies at the Anderson School of Management in 1995, which is consistently ranked among the top entrepreneurial programs in the country.

Harold and Pauline are survived by their daughter Linda, granddaughters Lisa and Bonnie, and five great-grandsons.

RAY STARK IN MEMORIAM

Institute faculty and staff were saddened with the passing of Ray Stark on January 17, 2004. Ray and his late wife Frances were loyal supporters of the Jules Stein Eye Institute for many years. Their establishment of the Frances and Ray Stark Professorship of Ophthalmology will provide an enduring legacy that will continue to benefit vision science research in perpetuity.

Born in New York City, Stark was educated at Rutgers and New York University Law School and worked initially as a reporter and publicist. After serving in the Navy during World War II, he entered the entertainment industry, becoming an agent and subsequently, a movie producer. For the next six decades, Ray Stark was recognized as a legendary and influential Hollywood insider. His films *Funny Girl*, *Night of the Iguana*, *The Goodbye Girl*, and *Steel Magnolias* are classics. In 1980, he received the Motion Picture Academy's highest honor—the Irving G. Thalberg Award.

He is survived by his daughter Wendy and granddaughter Allison.

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

OPHTHALMIC CARE FOR INDIGENT FAMILIES AND CHILDREN

The Jules Stein Eye Institute conducts several unique and essential programs to provide ophthalmic surgical and follow-up care to economically disadvantaged adults and children in the greater Los Angeles area. They are supported by Ms. Wallis Annenberg through The Annenberg Foundation. The Indigent Children's Program has also received funding from the L and S Milkin Foundation. To enable these programs to serve the greatest number of patients, JSEI physicians donate their services, and the Department of Anesthesiology and UCLA Medical Center discount their fees.

Indigent Families Program

The Indigent Families Program provides needed ophthalmic services to economically disadvantaged families. Patients suffering from glaucoma, cataracts, corneal opacification, and retinal diseases are evaluated at JSEI and when appropriate, surgery is performed. Referrals for long-term ophthalmic care are made when indicated. Families who qualify for this program typically earn too much money to receive government support, but cannot afford health insurance. Families benefit from treatments that have an immediate and significant impact on their lives.

Program Coordinators: **Ralph D. Levinson, MD**, Medical Director; and **Esther Aheroni**, Associate Administrator of the Jules Stein Eye Institute.

Indigent Children's Program

The Indigent Children's Program provides needed ophthalmic surgical services to economically disadvantaged youngsters. The program coordinator works directly with physicians and nurses from local city schools and health centers. Eligible patients are boys and girls who do not have medical insurance to cover their ophthalmic costs. They are in need of eye surgery to correct disorders such as strabismus (crossed eyes), cataract, or ptosis (droopy eyelids). Pediatric ophthalmologic care provided by JSEI includes physician and operating room services, as well as pre- and post-operative services. Good vision is particularly precious during childhood, and perhaps the strongest endorsement of the program is the positive change noted in each young patient's emotional, physical, and mental health following surgery.

Program Coordinator: **Mrs. Sandra Rosenbaum**, Child Development Associate and Educator, Pediatric Ophthalmology and Strabismus Division



Program coordinator Sandra Rosenbaum with a patient

"I appreciate what you are doing for me... When you finish, I will be a different person, and the children at school won't tease me anymore because my eyes will be straight. Thank you for everything."

—Letter from child with strabismus in the Indigent Children's Program

Pediatric Contact Lens Fund

Congenital and infantile cataracts pose a particularly serious threat to the fragile visual system of infants and children. These conditions require prompt surgical intervention and aggressive optical rehabilitation to optimize visual development. Contact lenses are the preferred method of optical correction after surgery, as they can be easily monitored and changed to respond to the rapid ocular growth during the first years of life. Pediatric contact lens care is complicated and expensive, since multiple sets of contact lenses are required. The Pediatric Contact Lens Fund helps parents with these expenses.

Program Coordinator: **Barry A. Weissman, OD, PhD**, Contact Lens Service Director



Dr. Barry Weissman examines a young child whose care is supported by the Pediatric Contact Lens Fund.

SHARED VISION

The JSEI Affiliates was launched in 1990 as a broad-based volunteer network "to support the programs of the Jules Stein Eye Institute and provide outreach to the Greater Los Angeles community." To further this objective, the JSEI Affiliates have



developed a program called Shared Vision, which collects donated eyeglasses to distribute to people who cannot afford to buy them.

Says project leader Francis Small, "Through this program, the Affiliates and its volunteers have collected thousands of pairs of used spectacles for refurbishment and distribution to health clinics and homeless shelters."

If you are interested in donating a pair of eyeglasses, please send them to JSEI Affiliates Shared Vision Program, 100 Stein Plaza, UCLA, Los Angeles, California, 90095-7000, or look for our collection bins located in patient suites throughout the Institute. For further information regarding the JSEI Affiliates, contact us at (310) 825-4148 or visit our website at www.jseiaffiliates.com.

Special Events

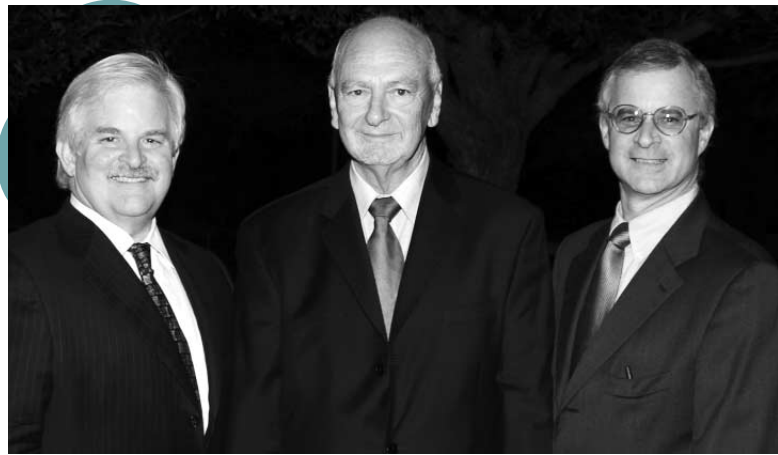
Activities

DR. HORWITZ CELEBRATES APPOINTMENT AS OPPENHEIMER BROTHERS CHAIR

JSEI Director Bartly J. Mondino, MD, joined faculty and friends on March 4, 2004, to celebrate the appointment of **Joseph Horwitz, PhD**, Professor of Ophthalmology, as the first Oppenheimer Brothers Chair in Ophthalmology.

Dr. Horowitz began his vision science research career in 1966, and has been a full-time faculty member at the Jules Stein Eye Institute since 1971. His selection for the Oppenheimer Brothers Chair in Ophthalmology is an honor and affirmation of his stature in the field.

The Chair was made possible by a generous gift from the Oppenheimer Brothers Foundation. The four sons of the Brigadier General H. L. Oppenheimer, son of Doris Stein, established this relatively new foundation in 1997. H. Tony Oppenheimer, Foundation President, attended the reception along with his brother Reed, executive board member, and their respective spouses Marti and Gabrielle, who serve on the foundation's advisory committee. Also present was Tony's son Brian, a member of the foundation's junior board. Brothers Eric and Hal, who are part of the executive board, were unable to attend. This gift is the first major contribution to the vision sciences by this foundation.



Oppenheimer brothers Tony (left) and Reed (right) congratulate Dr. Horwitz.



Dr. Horwitz celebrates this special day with a surprise visit by his children Dan (left) and Leora (2nd from left), and friend Ms. Hilda Rich (right).

IMPORTANT JSEI PHONE NUMBERS

PATIENT CARE

JSEI Ophthalmology Referral Service	(310) 825-5000
JSEI Ophthalmology Emergency Service after hours	(310) 825-3090 (310) 825-2111
JSEI Specialty Areas:	
Aesthetic Eye and Facial Surgery	(310) 794-9341
Contact Lens Service	(310) 206-6351
Cornea-External Ocular Disease and Uveitis	(310) 206-7202
Glaucoma	(310) 794-9442
Neuro-Ophthalmology	(310) 825-4344
Pediatric Ophthalmology and Strabismus	(310) 825-5000
Refractive Surgery (Custom LASIK, Custom LASEK/PRK)	(310) 825-2737
Retina	(310) 825-5000

FUND RAISING AND OUTREACH

JSEI Development Office	(310) 206-6035
JSEI Affiliates	(310) 825-4148

Interested in joining?

If you would like information on how to join the UCLA Department of Ophthalmology Association, please contact the JSEI Development Office at (310) 825-4148 or e-mail closson@jsei.ucla.edu. You can obtain a membership registration form on the JSEI website www.jsei.org/About/about_jules_uclaophthalmology.htm



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