

THE SCHEIE LOOKING GLASS

Volume 3, Number 2

Spring, 2002

INSIDE THIS ISSUE:

Residents	2
Cutting Edge Science	3
House Staff Moving On	4
Kudos	5
Technicians	6
Specialties & Services	8
SEI Faculty	9
Lectures & Seminars	10

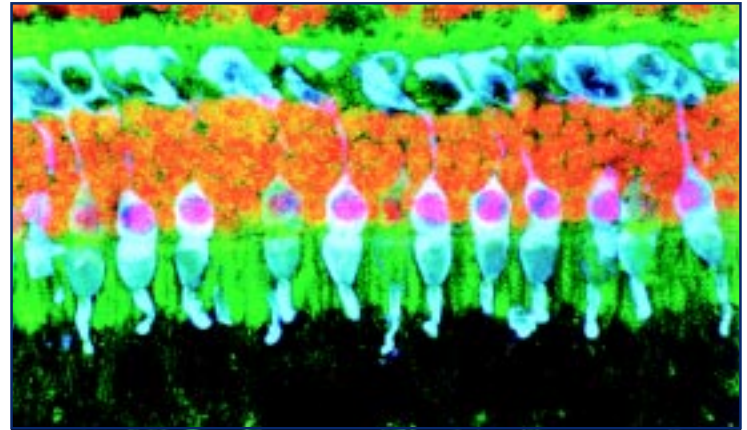


Shown using the new Zeiss LSM 510 confocal microscope are **Xinyu (Jasmine) Zhao, Technical Director, and Drs. Ed Pugh and Ann Milam, Co-Directors.**

NEW CONFOCAL MICROSCOPE ZOOMS IN ON EYES

SEI researchers welcomed the much anticipated Zeiss 510 confocal microscope housed in the **F. M. Kirby Confocal Microscopy Laboratory** on the 6th floor of the Scheie Eye Institute. This laboratory will function as a core facility for the Penn vision research community. The technical director of this new facility is **Xinyu (Jasmine) Zhao**, an expert microscopist who worked in the confocal microscopy facility at the Wistar Institute for the past three years.

Why all the excitement? In brief, the new confocal microscope will allow SEI researchers to examine ocular tissues in a new way, enhancing their current projects and opening the doors to new investigations and collaborations. Our researchers currently use both light and electron microscopy to examine normal and diseased ocular tissues. Conventional light microscopy is



Confocal microscope image of normal human photoreceptors. The cones are shown in blue with magenta nuclei. The rod inner segments are shown in green. The rod nuclei are orange.

Image courtesy of Dr. A. Milam

used to examine living cells or relatively thick tissue sections, but is limited because out-of-focus structures often obscure details within the areas of interest. Electron microscopy of ultrathin sections of tissue offers excellent resolution of tiny details, but is limited because preparative techniques are time consuming and may introduce artifacts into the specimens. In addition, electron microscopy provides only static two-dimensional images of the tissues under study.

Confocal microscopy solves these problems and allows scientists to examine tissues and cells in a new way. Tissue sections or living cells are examined under different experimental conditions. The confocal microscope has a shallow depth of field so an image is collected from an optical section, rather than from the full depth of the specimen as in conventional light microscopy. This provides crisp images of preserved and living cells, and can also be used to localize individual proteins (such as visual pigments in rods and cones) after they are labeled with fluorescent-tagged antibodies. Another advantage of confocal microscopy is that specimens can be optically sectioned not only in the XY plane, but also vertically in the Z plane. With the sophisticated software of the Zeiss microscope, these images can

Continued on page 7



RESIDENCY PROGRAM TRAINS THE NEXT GENERATION

In virtually every academic department of ophthalmology, the residency is a vital and essential component. Indeed, for many academic ophthalmologists, the opportunity to teach and to mentor residents and medical students is the raison d'être for deciding to practice in an academic medical center rather than a private practice.

At Penn the residency in ophthalmology was initiated by **Francis Heed Adler, M.D.**, who chaired the Department of Ophthalmology from 1936 to 1960, and who envisioned a program for graduate training in ophthalmology. **Harold G. Scheie, M.D.** was his first resident. Since then the residency program has flourished. Today our residents provide care for patients using the latest medical and scientific advances.

Dr. Stuart L. Fine, Chair of the Department of Ophthalmology and **Dr. Nicholas J. Volpe**, Director of the Residency Program, continue to place residency training among the department's highest priorities. The first year of residency is devoted to mastering the basic ophthalmologic exam, acquiring diagnostic skills, and learning the fundamentals of surgery. The second year introduces new challenges, including the introduction of eye surgery under faculty supervision and subspecialty service rotations. The third year is an intensive period of supervised eye surgery and prepares the resident to become a comprehensive

ophthalmologist or to proceed to a fellowship. The department opened a state-of-the-art surgical laboratory so that residents could practice surgical techniques using an operating microscope. Part of the third year is dedicated to an elective block for each resident to pursue a research project with a member of our faculty.

A comprehensive didactic program complements the clinical experience. The curriculum includes lectures, Grand Rounds, Visiting



Residents Paul Tapino, M.D. (seated) and Michael Ibarra, M.D. examine a patient using a slit lamp.

Professor seminars, practical sessions, and national conferences. Residents present research findings at national meetings, publish in peer review ophthalmic journals, and collaborate with faculty who are world-renowned vision scientists. Interested residents are encouraged to pursue academic careers, enabling them to transform research knowledge to cutting edge patient care.

Our residency continues to attract the best and the brightest medical students from around the country. In 2001, about 850 applicants applied for one of the 438 ophthalmology residency positions available in the United States. Over 400 candidates applied to SEI in 2001, and from this highly competitive applicant pool 60 people were selected to interview. Five candidates are chosen through the Ophthalmology Matching Program, a national program that assures fairness in the selection process.

Dr. Ken Schindler, who received his M.D. and Ph.D. from Washington University, St. Louis, a second-year resident, is delighted to be at SEI because of the strong commitment to teaching and the 10-week elective block in the senior year during which time he will begin a research project that he hopes will lead to a KO8 award from NIH. **Dr. Lisa Schocket** chose Scheie because of the diverse learning environments: **Hospital of the University of Pennsylvania** provides



Pictured left to right: Michael Ibarra, M.D., Raymond S. Douglas, M.D., Ph.D., Kenneth S. Schindler, M.D., Ph.D., Damon B. Chandler, M.D., Leonard Feiner, M.D., Ph.D., Lisa Schocket, M.D., Atul Sharma, M.D., Leila Mokhtarzadeh, M.D., Jonathan L. Prenner, M.D., Paul J. Tapino, M.D., Alan C. Westernen, M.D., Matthew F. Gardiner, M.D., Carolyn Glazer-Hockstein, M.D., Gabrielle Bonhomme, M.D., and Michael Tracy M.D.

PHYSICIAN-SCIENTIST PROBES: WHY DO VISION CELLS DIE BEFORE THEIR TIME?



Dr. Dunaief uses a slit lamp biomicroscope to examine the macula of a patient with age-related macular degeneration.

Joshua Dunaief, M.D., Ph.D., a vision scientist at the **F. M. Kirby Center for Molecular Ophthalmology**, is searching for a killer. He is studying what causes the death of photoreceptors (vision cells) that eventually leads to loss of sight in patients with age-related macular degeneration (AMD). If vision cell death could be prevented, sight could be preserved.

Dr. Dunaief was prompted to study AMD because of its enormous impact on the aging population and on his patients at the **Scheie Eye Institute**. AMD is the most common cause of severe and irreversible vision loss in the U.S., affecting over 1 million people and “the current treatments are not adequate!” With the aging of the baby-boomer population, the incidence of AMD-related vision loss is rising. Dr. Dunaief believes that it is imperative to find a treatment soon.

Dr. Dunaief’s research led him to study mechanisms of aging, particularly those caused by light. Most people are aware that sunlight causes wrinkling of the skin. Although the eye is designed to concentrate light, too much light absorption causes oxidative stress, which results in programmed cell death or apoptosis. Apoptosis is a mechanism of cellular suicide that removes unwanted tissues during embryologic development,

such as the skin web between the fingers. In disease processes such as AMD, apoptosis, brought about by oxidative stress from light, kills retinal neurons essential for vision.

This is why antioxidants were considered as treatments for AMD. The Age-Related Eye Disease Study or AREDS included over 3,000 participants with AMD. Those study participants who took Vitamins A, C, and E, the antioxidant vitamins, as well as supplemental zinc and copper, reduced by 20% their risk of significant vision loss over a 3-year period.

Dr. Dunaief’s current research is focused on answering two critically important questions:

- Which antioxidants protect cells from light damage?
- Once oxidative stress occurs, why do cells die?

One approach Dr. Dunaief uses is to study donor human eyes in collaboration with **Dr. Ann Milam**. When he examined donor retinas affected by AMD under a microscope, he identified broken DNA, a sign of impending cell death by apoptosis. These observations will help him develop anti-apoptotic

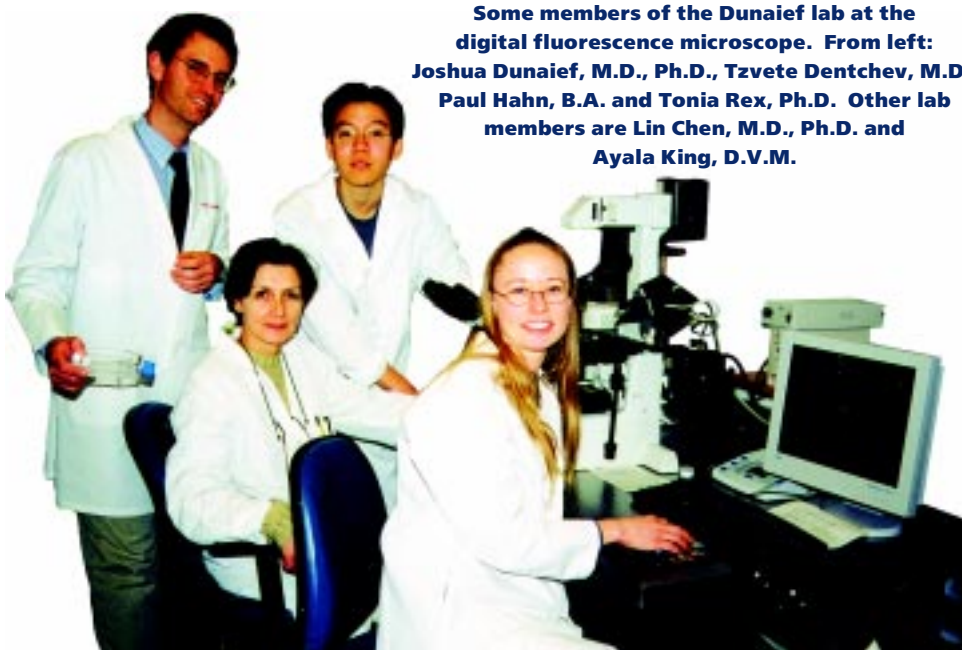
This new information on mechanisms of cell death in the retinal pigment epithelium and retina is essential for developing new, effective treatments for AMD.

strategies. Using a microarray, an amazing instrument, which looks at the expression of thousands of genes at once, Dr. Dunaief, working with **Dr. Lin Chen**, compares human AMD donor eyes to normal donor eyes to understand what, on a molecular level, causes vision loss in AMD. In another approach, he grows retinal pigment epithelial cells in culture and exposes them to blue light, causing oxidative stress. He then studies the ways in which the cells attempt to recover from the stress and the mechanisms by which they ultimately die. This new information on mechanisms of cell death in the retinal pigment epithelium and retina is essential for developing new, effective treatments for AMD.

Working at the F. M. Kirby Center for

Continued on page 7

Some members of the Dunaief lab at the digital fluorescence microscope. From left: Joshua Dunaief, M.D., Ph.D., Tzvete Dentchev, M.D., Paul Hahn, B.A. and Tonia Rex, Ph.D. Other lab members are Lin Chen, M.D., Ph.D. and Ayala King, D.V.M.



SEI RESIDENT CHOSEN TO PRESENT RESEARCH



Each annual meeting of the Association of University Professors of Ophthalmology (AUPO) now features presentations by young investigators at the AUPO/RPB Resident and Fellow Research Forum, which is supported by Research to Prevent Blindness (RPB) of New York. A panel of AUPO members evaluates and ranks research abstracts submitted by ophthalmology residents and fellows across the U.S. This year, **Michael Ibarra, M.D.**, a second-year resident in our department, was

one of the four invited young investigators. Dr. Ibarra's research, conducted in collaboration with **Dr. Michael Tolentino**, a scientist at the F.M. Kirby Center for Molecular Ophthalmology, reported on how blood flow in the back of the eye, pigmentation of the retina, and the presence of blood under the retina influenced the temperature rise in eyes treated with transpupillary thermotherapy (TTT), a relatively new technique for treating selected patients with

abnormal blood vessel growth.

Since its inception in 1997, a majority of those who have presented at the AUPO/RPB Resident and Fellow Research Forum have accepted full-time academic positions. Previous Scheie forum presenters include **Jeffrey W. Berger, M.D., Ph.D.**, **Joshua Dunaief, M.D., Ph.D.**, and **Michael Tolentino, M.D.** Our department is proud of Dr. Ibarra's research contributions and is confident that he will have an extraordinarily successful career.

HOUSE STAFF MOVING ON

RESIDENTS

Raymond Douglas, M.D., Ph.D.

Ray is heading west to Los Angeles where he will be a fellow in oculoplastics and orbital surgery at UCLA / Jules Stein Eye Institute. He will be supported by an award from the Heed Foundation. His fellowship includes protected time to investigate immune aspects of thyroid orbitopathy.



Matthew Gardiner, M.D.

After being graduated from Penn Medical School, Matt completed a residency in Internal Medicine at Penn before starting in ophthalmology. Matt is headed to Brigham and Women's Hospital in Boston for a one-year fellowship in cornea and refractive surgery.



Jonathan Prenner, M.D.

Jon's destination is Beaumont Hospital in Royal Oak, Michigan where he will begin a two-year fellowship in vitreo-retinal surgery. Jon has been Co-Chief Resident this year. His fellowship is being supported by the Heed Foundation.



Atul Sharma, M.D.

Co-Chief Resident Atul returns to Boston where he was graduated from Tufts School of Medicine. Atul will begin a two-year fellowship in vitreo-retinal surgery at the Massachusetts Eye and Ear Infirmary.



Alan Westernen, M.D.

Alan is returning home to his native state of California to pursue a one-year fellowship in cornea and refractive surgery at the University of California at San Diego.



FELLOWS

Teresa Brevetti, M.D.

Teresa completed her residency at Nassau University Medical Center, Stoney Brook, NY before arriving at Scheie as a fellow in glaucoma. She plans to return to New York where she will join a practice specializing in glaucoma.



Scott Goldstein, M.D.

After completing his ophthalmology residency at Scheie Eye Institute, Scott stayed on for a two-year fellowship in oculoplastics and orbital surgery. In addition to becoming a member of the oculoplastics and orbital surgery service at Scheie, he will assume the role of Director of Medical Student Education, overseeing the medical school ophthalmology curriculum.



Dina Jacobs, M.D.

Dina was graduated from Penn Medical School and has remained at Penn ever since. She completed her residency in neurology followed by two fellowship programs in multiple sclerosis and neuro-ophthalmology. Dina will join the Penn neurology department as assistant professor.



Jimmy Jee, M.D.

Upon graduation from his fellowship in pediatric ophthalmology at CHOP, Jimmy will join a private practice in Staten Island, NY specializing in pediatric ophthalmology and adult strabismus. He will also be a volunteer faculty member at St. Vincent's Hospital and Medical Center, NY where he completed his internship.



APPOINTMENTS AND AWARDS

Edward N. Pugh, Ph.D., Senior Scientist at the F. M. Kirby Center for Molecular Ophthalmology was appointed to a 5-year term on the NIH Center for Scientific Review Advisory Committee, which reviews grant applications from all disciplines.

Nisha Gupta, Ph.D., post-doctoral fellow, received an NEI travel award to annual meeting of the Association for Research in Vision and Ophthalmology to present a paper on *Phosphotyrosine: A Novel Marker for H1 Horizontal Cells in Normal and Diseased Retinas*.

The co-authors are **Wai-Xing Tang, M.D., Ph.D.**, and **Ann H. Milam, Ph.D.**

Ann H. Milam, Ph.D., Director of the Retinal Degeneration Histopathology Laboratory, was appointed to the editorial board of *Investigative Ophthalmology and Visual Science*, the official journal of the Association for Research in Vision and Ophthalmology. Dr. Milam was also appointed to the Scientific Advisory Board of the EyeSight Foundation of Alabama.

Samuel G. Jacobson, M.D., Ph.D., Director of the Center for Hereditary Retinal Degenerations,

Jean Bennett, M.D., Ph.D., Senior Scientist at the F. M. Kirby Center for Molecular Ophthalmology, and

Albert M. Maguire, M.D., Director of the Retina and Vitreous Service and scientist at Scheie Eye Institute are co-recipients of The 2001 Foundation Fighting Blindness Board of Trustees Retinal Degeneration Research Award along with Cornell veterinary clinician-scientists

Gustavo D. Aguirre, V.M.D., and **Gregory M. Acland, V.M.D.**, and University of Florida scientist

William Hauswirth, Ph.D. It was the second time Dr. Jacobson has received this distinguished award, offered in recognition of his long-standing commitment and dedication to research directed at finding treatments and cures for patients suffering from retinal degenerative diseases.

Alan M. Laties, M.D., received the Research to Prevent Blindness (RPB) Senior Scientific Investigator Award of \$65,000 to enable nationally recognized senior

scientists to pursue promising scientific leads in eye research.

Albert M. Maguire, M.D., received the RPB Physician-Scientist Merit Award of \$55,000, granted to physician-scientists nationally recognized in their subspecialty and actively engaged in clinical research.

Michael J. Tolentino, M.D., received the RPB Career Development Award of \$200,000, which provides start up support for clinician-scientists during the first four years of their careers.

Artur V. Cideciyan, Ph.D., received the RPB William & Mary Greve Scholarship Award of \$60,000 for outstanding research achievement.

Stuart L. Fine, M.D. received an RPB unrestricted grant of \$110,000 to support research in the Department of Ophthalmology.

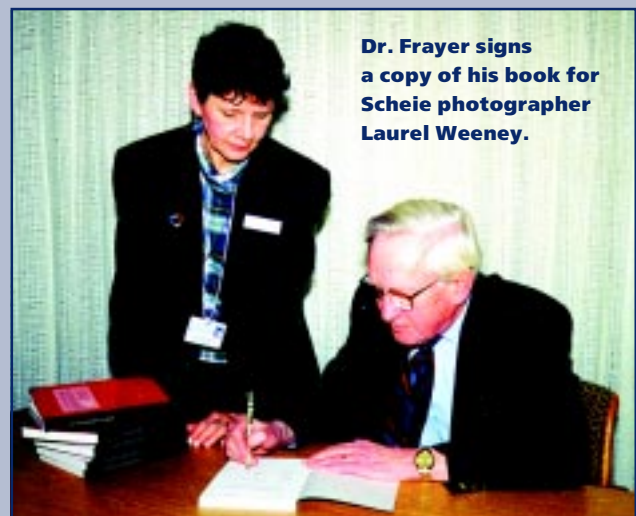
Clarification from last issue

We reported that we are #2 in research grants from the NIH. We wish to clarify that we are #2 in research grants from the NEI (National Eye Institute), the vision research arm of the NIH.

K
U
D
D
O
S

BOOK REVEALS SECRETS OF SCHEIE

Dr. William C. Frayer, Professor Emeritus at Scheie Eye Institute, published **An Ophthalmic Journey 50 years at the University of Pennsylvania** last month. The book begins with his arrival in Philadelphia to start his ophthalmology residency in 1949. He gives us a fascinating picture of his life and the state of ophthalmology in those early years and tells the story of the development of the Scheie Eye Institute through intimate vignettes of the people who practiced and worked in the Department during the span of his career there. A copy of the book was mailed to all Scheie Alumni and friends and has received countless warm and enthusiastic endorsements. A book signing celebration was held for Scheie faculty and staff on April 10. Everyone enjoyed the festivities and it was great fun to find photos of the "old timers" in their younger days.



Dr. Frayer signs a copy of his book for Scheie photographer Laurel Weeny.

PROFESSIONALISM KEY TO TECHNICIAN EXCELLENCE

The ophthalmic technician staff are professional colleagues who assist our ophthalmologists in the care of their patients. Our technicians are a highly-skilled team of professionals, many with special qualifications based on education and experience, who assist in patient assessment and treatment of various eye conditions.

The Institute actively supports the professional growth and development of its ophthalmic technician staff. The department's goal is that all technicians be certified. In addition, all non-certified new-hires must pursue certification as a condition of employment. Cheryl Atkins-Lubinski, Chief Operating Officer at Scheie, who stated "Certification is important not only because it shows a standardized level of competency, but it also promotes professionalism within a field," instituted the requirement for certification. In the past two years, four technicians have achieved certification and four more are working towards that goal. The overall certification rate is 80%. Technicians are encouraged to join and participate in the activities of the Philadelphia Regional Ophthalmic Society

(PROS). The department pays the annual fee for the technicians who are members.

Because of the shortage of ophthalmic technicians and a general lack of educational programs in the Delaware Valley, the department periodically hires and trains people from non-ophthalmic careers. "If a person has a basic skill set in healthcare, good work references, and a genuine interest in eye care, we will develop an educational plan for that trainee that begins with the Ophthalmic Assistant Home Study Course" states **Michele Sheehan**, Director of the ophthalmic technician staff. "These educational plans can be quite extensive because of the number of skills requiring mastery for a basic level technician, and because sitting for the first level test (COA) requires having worked in the field for one year."

The ophthalmic technicians are sponsored when they attend national meetings such as **JCAHPO, The Joint Commission for Accreditation of Health Providers in Ophthalmology**.

However, when they attend, they must teach a course. JCAHOP conducts meetings in concert with the annual meetings of the American Academy of Ophthalmology. Scheie technicians have a long-standing history teaching at the JCAHPO. In fact, Scheie's own

Fran Ward wrote the organization's first tonometry course. The instructors for the first course were **Fran Ward**, **Diane Heistand** and **Michele Sheehan** all of Scheie Eye Institute. This past year, eight Scheie technicians taught at the annual JCAHPO meeting.



Michele Sheehan and Cheryl Scott pause for a moment from working on the technician-staffing schedule.

Scheie's technician presence at national meetings also has given Scheie enhanced visibility on a national level as a potential employer of choice among ophthalmic technicians. "I am currently interviewing technician candidates from Kentucky and Michigan who are interested in relocating here," states Michele Sheehan.

One of the most important roles of the technicians is regulatory compliance. This year the technician staff was critical in the department's success during several hospital inspections dealing with the clinical environment of patient care. The great variety of skills among our technicians was most evident and appreciated at the time of these inspections.

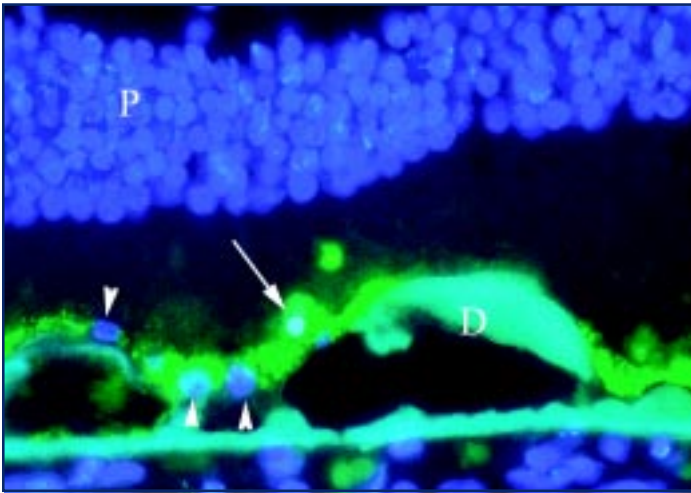
Michele Sheehan recently hired a technician supervisor and, remaining true to the department's desire to invest in its technician staff, promoted from within. **Cheryl Scott**, who has been at Scheie for two years, was named technician supervisor and helps Michele manage over 30 technicians in Scheie's five clinical practice locations. As the department continues to grow with a sixth satellite practice scheduled to open next year, the technician staff at Scheie stands prepared to cast its net wider to help bring Scheie's excellence in patient care to the community.

By Michele Szkolnicki



Ophthalmic technicians Michael Machristie, David Spence and Denise McGinn test the function of the teaching slit lamp, which is hooked up to a video monitor.

Physician-Scientist . . . *Continued from page 3*



Normal and dying (apoptotic) retinal pigment epithelial cells (RPE) in a patient with age-related macular degeneration. Large arrow indicates TUNEL positive (blue-green) apoptotic RPE nucleus. Arrowheads indicate surviving (blue) RPE nuclei. "D" indicates large druse. "P" indicates photoreceptor nuclei.

Residency Program . . . *Continued from page 2*

patients with rare systemic diseases manifesting in the eye; **Children's Hospital of Philadelphia** offers interesting genetic and rare children's disorders; the **Veterans' Administration Hospital** affords the resident excellent clinical experience; and Scheie Eye Institute

provides superb teaching. **Dr. Michael Ibarra**, a second-year resident, continues to be impressed by the willingness of the faculty to help residents pursue clinical or basic science research.

Not all of the residents' energies are academically

Molecular Ophthalmology has had a profound effect on Dr. Dunaief's research. Not only does he credit the state-of-the-art equipment and facilities, but also the opportunity to collaborate with other scientists at the F. M. Kirby Center and at Penn, for significantly advancing his work. Dr. Dunaief was also very emphatic about the importance of Philanthropy. "Writing NIH grants takes a great deal of time, private gifts allow scientists to expedite their research ideas. Private support also assures continuity of laboratory personnel. Valuable, well-trained, enthusiastic lab colleagues can be lost if there is a gap between NIH grants." A recent breakthrough illustrates this point. A pilot study, not funded by NIH, demonstrated that apoptosis occurs in AMD eyes.

With physician-scientists such as Dr. Josh Dunaief on the trail of mechanisms causing cell death in AMD, success should not be far behind. People with AMD must be given the opportunity to enjoy the gift of good eyesight throughout their lives.

By Ann Sacks

oriented; informal gatherings at the homes of SEI faculty are staples on the yearly calendar. SEI picnics, regional social events, and daily camaraderie with classmates, technicians, and faculty round out a full schedule.

Over the past few years our residents have gone on

to fellowships at some of the most sought-after programs in the U.S. Several of these individuals will return to Scheie as faculty members and become mentors for the next generation of future leaders in clinical ophthalmology and eye and vision research.

By Sue Hess

Confocal Microscope . . . *Continued from page 1*

be viewed in three dimensions, and can even be rotated in space to obtain views of the specimen from all directions.

When an investigator finishes collecting data, the images are transferred to a CD. Workstations have been established in the **F. M. Kirby Confocal Microscopy Laboratory** and the **F. M. Kirby Center for Molecular Ophthalmology**. Each station has a computer with Zeiss software and imaging software (Photoshop, PowerPoint, Illustrator, etc.), so investigators can manipulate their images for lectures, posters, or publication plates.

Dr. Stuart Fine, Chairman of the SEI, took the lead in establishing this new research facility, with generous support from the F. M. Kirby Foundation and the National Eye Institute. Drs. Pugh and Milam helped to obtain the confocal microscope and prepare the suite, and serve as co-directors of the new facility. Focus your eyes on the bulletin board outside SEI 628, because new multicolor images from the various SEI laboratories will be posted each week!

By Ann H. Milam, Ph.D.

Scheie scientists will use the confocal microscope to enhance projects already underway.

- **Dr. Richard Stone:** Localizing nicotinic receptors in the human retina
- **Dr. Edward Pugh:** Examining transgenic mouse and frog tissues
- **Drs. Jean Bennett and Albert Maguire:** Examining retinas treated by gene therapy
- **Dr. Josh Dunaief:** Examining living cultured cells and dying cells in human AMD maculas
- **Dr. Eric Pierce:** Localizing the RP1 protein in rods and cones
- **Dr. Michael Tolentino:** Examining retinas with choroidal neovascularization
- **Drs. Rong Wen and Alan Laties:** Studying retinal blood vessels treated with their newly developed dye
- **Drs. Ann Milam, Samuel Jacobson, Artur Cideciyan and Tomas Aleman:** Examining degenerating human retinas with retinitis pigmentosa, AMD, and other inherited diseases

Once the quality of the Zeiss confocal images is recognized, other investigators will undoubtedly expand their studies to include confocal microscopy.

SPECIALTIES & SERVICES

Applied Ophthalmic Neurobiology Laboratory

Alan M. Laties, M.D.
Richard A. Stone, M.D.

Center for Preventive Ophthalmology and Biostatistics

Judy Alexander, B.A.
Mary Brightwell-Arnold, B.A.
Stuart L. Fine, M.D.
Maureen G. Maguire, Ph.D.
Ellen Peskin, M.A.
Renee C. Rees, Ph.D.

Center for Hereditary Retinal Degenerations

Tomas S. Aleman, M.D.
Artur V. Cideciyan, Ph.D.
Samuel G. Jacobson, M.D., Ph.D.

Comprehensive Ophthalmology

Lin Chen, M.D., Ph.D.
William C. Frayer, M.D. (emeritus)
David M. Kozart, M.D.
Mina Massaro-Giordano, M.D.
Charles W. Nichols, M.D.
Stephen E. Orlin, M.D.
Jane Z. Portnoy, M.D.
Prithvi S. Sankar, M.D.
Michael E. Sulewski, M.D.
Nasreen A. Syed, M.D.
Jeffrey P. Wick, M.D.

Contact Lens Service

Diane Heistand, COT, NCLC, FNAO
Kathy McNelis, COA, NCLC
Janice Petner, COA
Cynthia Silvestri, COA, NCLC
Fran Ward-Frederic, COMT, NCLC

Cornea/External Diseases/ Refractive Surgery

Stephen E. Orlin, M.D.
Michael E. Sulewski, M.D.

Development

Ann Sacks

Educational Activities

Jenny Bartelle
Sue Hess

F.M. Kirby Center for Molecular Ophthalmology

Jean Bennett, M.D., Ph.D.
Joshua L. Dunaief, M.D., Ph.D.
Kristen Huang, Ph.D.
Edward N. Pugh, Ph.D.
Eric A. Pierce, M.D., Ph.D.
Dwight E. Stambolian, M.D., Ph.D.
Michael J. Tolentino, M.D.

Genetics

Dwight E. Stambolian, M.D., Ph.D.

Glaucoma

Eydie G. Miller-Ellis, M.D.
Jody R. Piltz-Seymour, M.D.
Prithvi S. Sankar, M.D.
Richard A. Stone, M.D.

Low Vision Research and Rehabilitation Center

Janet DeBerry Steinberg, O.D.
Ranjoo K. Prasad, O.D.
Dawn Ciccarone, O.T.

Medical Retina

Alexander J. Brucker, M.D.
Joshua L. Dunaief, M.D., Ph.D.
Stuart L. Fine, M.D.
Juan E. Grunwald, M.D.
Albert M. Maguire, M.D.
Michael J. Tolentino, M.D.

Medical Therapies Initiative

Alan M. Laties, M.D.
Rong Wen, M.D., Ph.D.

Neuro-Ophthalmology

Laura J. Balcer, M.D.
Steven L. Galetta, M.D.
Grant T. Liu, M.D.
Nicholas J. Volpe, M.D.

Neuroprotection Laboratory

Alan M. Laties, M.D.

Vivian Simkins Lasko Retinal Vascular Research Laboratory

Joan Dupont
Juan E. Grunwald, M.D.
Jody R. Piltz-Seymour, M.D.
Charles Riva, D.Sc. (Adjunct)

Oculoplastics & Orbital Disease & Surgery

Roberta E. Gausas, M.D.
James A. Katowitz, M.D.

Ophthalmic Technicians, Director

Michele Sheehan, COMT

Optical Shop

Anita Fulton
Paul Kohan, ABO
Joseph N. Rybak, ABO

Pathology

William C. Frayer, M.D. (Emeritus)
Nasreen A. Syed, M.D.

Pediatric

Oculoplastic Surgery

James A. Katowitz, M.D.

Pediatric Ophthalmology

Jane C. Edmond, M.D.
Brian J. Forbes, Ph.D., M.D.
Ellie L. Francis, O.D., Ph.D.
Monte D. Mills, M.D.
Eric A. Pierce, M.D., Ph.D.
Graham E. Quinn, M.D.
Terri L. Young, M.D.

Photography

Jim Berger
Cheryl Devine
Deborah Elkins
William Nyberg
Laurel Weeney

Retinal Degeneration Histopathology Laboratory

Ann H. Milam, Ph.D.

Strabismus-Adult

Nicholas J. Volpe, M.D.

Ultrasound

Kym Gendron, R.O.U.B.

Uveitis

Nasreen A. Syed, M.D.

Vitreoretinal Surgery

Alexander J. Brucker, M.D.
Albert M. Maguire, M.D.
Michael J. Tolentino, M.D.

Residents

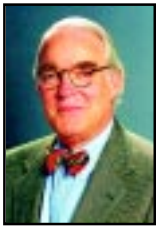
Gabrielle Bonhomme, M.D.
Damon B. Chandler, M.D.
Raymond S. Douglas, M.D., Ph.D.
Leonard Feiner, M.D., Ph.D.
Matthew F. Gardiner, M.D.
Carolyn Glazer-Hockstein, M.D.
Michael Ibarra, M.D.
Leila Mokhtarzadeh, M.D.
Jonathan L. Prenner, M.D.
Lisa Schocket, M.D.
Atul Sharma, M.D.
Kenneth S. Shindler, M.D., Ph.D.
Paul J. Tapino, M.D.
Michael Tracy, M.D.
Alan C. Westeren, M.D.

Fellows

Teresa L. Brevetti, M.D.
Glaucoma
Scott M. Goldstein, M.D.
Oculoplastics
Dina Jacobs, M.D.
Neuro-Ophthalmology
Jimmy Jee, M.D.
Pediatric Ophthalmology
Robert A. Stoltz, M.D., Ph.D.
Retina

**PENNLine, a toll-free physician-to-physician line,
provides quick, direct access to Penn physicians. Call 1-800-635-7780.
For patient appointments, call PENNHealth 1-800-789-PENN.**

Scheie Eye Institute Faculty and Clinical Staff



Stuart L. Fine, M.D.
Chairman and
Director



Tomas S. Aleman, M.D.
Hereditary Retinal
Degeneration



Laura J. Balcer, M.D.
Neuro-Ophthalmology
Epidemiology



Jean Bennett, M.D., Ph.D.
Retinal Degeneration
Genetics Research



Alexander J. Brucker, M.D.
Retina & Vitreous



Lin Chen, M.D., Ph.D.
Comprehensive
Ophthalmology



Artur V. Cideciyan, Ph.D.
Retina Research



Joshua L. Dunaief, M.D., Ph.D.
Medical Retina
Retina Research



Jane C. Edmond, M.D.
Pediatric
Ophthalmology



Brian J. Forbes, M.D., Ph.D.
Pediatric Ophthalmology



Ellie L. Francis, O.D., Ph.D.
Pediatric Optometry



William C. Frayer, M.D.
Pathology



Steven L. Galetta, M.D.
Neuro-Ophthalmology



Roberta E. Gausas, M.D.
Oculoplastics &
Orbital Surgery
Cosmetic Surgery



Juan E. Grunwald, M.D.
Medical Retina
Retina Research



Kristen Huang, M.D.
Molecular Genetics
Research



**Samuel G. Jacobson,
M.D., Ph.D.**
Hereditary Retinal
Degeneration



James A. Katowitz, M.D.
Pediatric Oculoplastic
Surgery



David M. Kozart, M.D.
Vice Chairman,
Administration
Comprehensive
Ophthalmology



Alan M. Laties, M.D.
Retinal Degeneration
Research



Grant T. Liu, M.D.
Neuro-
Ophthalmology
Pediatric Neuro-
Ophthalmology



Albert M. Maguire, M.D.
Retina & Vitreous
Retinal Degeneration
Research



Maureen G. Maguire, Ph.D.
Biostatistics
Epidemiology



Mina Massaro-Giordano, M.D.
Comprehensive
Ophthalmology



Ann H. Milam, Ph.D.
Retina Research



Eydie G. Miller-Ellis, M.D.
Glaucoma



Monte D. Mills, M.D.
Pediatric
Ophthalmology



Charles W. Nichols, M.D.
Comprehensive
Ophthalmology



Stephen E. Orlin, M.D.
Cornea/External
Diseases/
Refractive Surgery



Eric A. Pierce, M.D., Ph.D.
Pediatric Ophthalmology
Genetics Research



Jody R. Piltz-Seymour, M.D.
Glaucoma
Glaucoma Research



Jane Z. Portnoy, M.D.
Comprehensive
Ophthalmology



Ranjoo Prasad, O.D.
Low Vision



Edward N. Pugh, Ph.D.
Retina Research



Graham E. Quinn, M.D.
Pediatric
Ophthalmology



Renee C. Rees, Ph.D.
Biostatistics
Epidemiology



Prithvi S. Sankar, M.D.
Glaucoma
Comprehensive
Ophthalmology



**Dwight E. Stambolian,
M.D., Ph.D.**
Genetics
Comprehensive
Ophthalmology



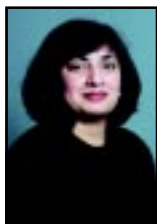
Janet DeBerry Steinberg, O.D.
Low Vision



Richard A. Stone, M.D.
Vice Chairman,
Research Glaucoma



Michael E. Sulewski, M.D.
Cornea/External
Diseases/Refractive
Surgery



Nasreen A. Syed, M.D.
Comprehensive
Ophthalmology
Pathology
Uveitis



Michael J. Tolentino, M.D.
Retina & Vitreous
Retina Research



Nicholas J. Volpe, M.D.
Neuro-Ophthalmology
Motility/Strabismus
(Adult)



Rong Wen, M.D., Ph.D.
Retina Research



Jeffrey P. Wick, M.D.
Comprehensive
Ophthalmology



Terri L. Young, M.D.
Pediatric
Ophthalmology

**Department of Ophthalmology
Scheie Eye Institute**

Comments, suggestions?

Please write, fax or e-mail to:

Ann Sacks

Scheie Eye Institute

51 North 39th Street

Philadelphia, PA 19104

Phone: 215-662-8774

Fax: 215-662-1721

Email: ann.sacks@uphs.upenn.edu

www.penneye.com

**PUBLICATIONS
COMMITTEE**

STUART L. FINE, M.D.

Chairman, Director & Editor

CHERYL ATKINS-LUBINSKI

*Vice Chair and
Chief Operating Officer*

MARILYN KATZ

Special Assistant

JULI GRUBER-MAY, M.S.N., R.N.

Director of Regional Operations

SUE HESS

*Director of Educational
Activities*

FRANCIS J. MANNING, M.D.

*President of the Alumni
Association*

ANN H. MILAM, PH.D.

*Adjunct Professor of
Ophthalmology*

ANN SACKS

*Director of Development and
Alumni Relations*

FRANCES MANNING SMITH

*Senior Major Gifts Officer,
Medical Center Development*

MICHELE SZKOLNICKI, M.S., R.N.

*Director, Customer Relations
and Clinical Resource
Management*

Photography by
Bill Nyberg and Jim Berger

LECTURES AND SEMINARS MAY 2002 – JUNE 2002

**Visiting Professor Lectures are on Thursdays:
7:45-8:30 AM (Scheie Eye Institute Auditorium - Lower Level)
Noon- 1:00 PM (Thayer Conference Room, SEI 5th Floor)**

MAY 2, 2002

Jason S. Slakter, M.D.

Assistant Clinical Professor of
Ophthalmology
Columbia University College of
Physicians and Surgeons

7:45 AM *Photodynamic
Therapy for Exudative AMD:
A Practical Perspective*

Noon *Anecortave Acetate for
Exudative AMD: Results of a
Clinical Trial and Application of a
Digital Angiography Reading
Center*

MAY 9, 2002

Alan B. Brackup, M.D., F.A.C.S.

Private Practice, Langhorne, PA
7:45 AM *Oculoplastic Surgery:
Expanding the Envelope*

MAY 16, 2002

Louis A. Karp Lecture

8:00-9:00 AM
Morton Smith, M.D.
Professor of Ophthalmology
Washington University School of
Medicine
*What You See is What You
Get?? It Ain't Necessarily So*

MAY 17-18, 2002

128th Anniversary Meeting

Michael A. Kass, M.D.
Professor and Chair of
Ophthalmology
Washington University
School of Medicine
*Ocular Hypertension Treatment
Study & Corneal Thickness & IOP*

Jonathan Trobe, M.D.

Professor, Department of
Ophthalmology
University of Michigan
*Turning an Eye Blind: Mishaps in
Medical Practice*

**Sandra Frazier Byrne,
ROUB, RDMS**

Director, COMS and Visiting
Research Scholar
Mars Hill College
*Assessment of Orbital Disorders
Using Ultrasound and Ultrasound
in Ocular Trauma*

MAY 23, 2002

Jody Piltz-Seymour, M.D.

Associate Professor of
Ophthalmology
Scheie Eye Institute / University
of Pennsylvania
7:45 AM *Focal Arteriolar
Narrowing of Retinal Vessels
(FANs) in Glaucoma*

MAY 30, 2002

Paul Lee, M.D., JD

Professor of Ophthalmology
Duke University Eye Center
7:45 AM *Applying Data to
the Care of Patients with
Glaucoma and Diabetes*
Noon *Variability in Delivering
Eye Care and Measuring the
Quality of Eye Care*

June 6, 2003

Stuart L. Fine, M.D.

Professor and Chair of
Ophthalmology
Director, Scheie Eye Institute
7:45 AM *Historical Vignettes*

June 13, 2002

Scott M. Goldstein, M.D.

Oculoplastics Fellow
Scheie Eye Institute / University
of Pennsylvania
7:45 AM *Oculoplastics
Experiences in Kenya*

June 20, 2002

Terri L. Young, M.D.

Associate Professor of
Ophthalmology
University of Pennsylvania /
Children's Hospital of Philadelphia
7:45 AM *The Molecular
Genetics of Myopia*

**For more information on lectures and seminars,
call Sue Hess at 215-662-8020 or e-mail to sue.hess@uphs.upenn.edu**