



Viewpoint

Spring 2004

A Legacy of Leadership and Care

"MY APPOINTMENTS WITH DR. SRINIVASAN are essentially preventive good luck," quips Rand Araskog with a smile in his voice, speaking from his office in Palm Beach, Florida. "I hike up to the Harkness Eye Institute four times a year to keep my vision healthy. Of course, it is always a pleasure to see him, and we've become great friends over the years."

Mr. Araskog, the retired chairman and chief executive officer of ITT Corporation, feels so strongly about the excellent care he has received at the Harkness Eye Institute that he and his wife, Jessie Gustafson Araskog, have established the **A. Gerard DeVoe—B. Dobl Srinivasan Directorship of Ambulatory Eye Care** with an extraordinary gift.

con't. page 4



C. Manley

Rand and Jessie Araskog at their home in New York City.

World-Class Talent

TIME AND AGAIN, brilliant, talented and dedicated physicians and scientists from all over the world say that they have been drawn to New York City by the opportunity to study and work among the expert and renowned faculty at Columbia University Medical Center (CUMC). The Department of Ophthalmology's newest faculty members are no exception.

con't. page 11

IN THIS ISSUE...

- View from the Chair.....2*
- Visionary Leadership.....3*
- Flanzer Fellows3*
- Caring for the Community.....7*
- Visionaries & Luminaries.....8*

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View From the Chair

Dear Friends,

Spring has blossomed in New York City, and with it, many new plans, activities and ideas in the Department of Ophthalmology. Traditionally, this is an exciting and busy time when we observe tremendous growth in our residents' academic and clinical knowledge and begin planning for the coming academic year.

With this latest issue of *Viewpoint*, it is my great pleasure to announce that Rand Araskog, a founding member of our Board of Advisors, and his wife, Jessie Gustafson Araskog, have endowed the **A. Gerard DeVoe—B. Dobli Srinivasan Directorship of Ambulatory Eye Care** in honor of these two revered department physicians. Their gift will directly benefit the 20,000 individuals who use our eye clinic services each year.

At Columbia University Medical Center, we thrive on being at the forefront of ophthalmology—from the well-attended age-related macular degeneration conference to the state-of-the-art Flanzer Amphitheatre. We are successful in large part due to our outstanding faculty and the many talented young doctors and scientists who are working to understand, treat and cure diseases of the eye.

As you glimpse inside our world, please accept my renewed thanks for your dedication and commitment to our work in advancing ophthalmology and vision care. Your benevolence, dear friends and former patients, has resulted in unrestricted gifts to our Annual Fund that have totaled more than \$145,000 to date. Thank you, one and all, and please know how much we appreciate your caring.

With all good wishes to you and yours for a healthy Spring,



STANLEY CHANG, M.D.

K.K Tse and Ku Teh Ying Professor

Edward S. Harkness Professor

Chairman, Department of Ophthalmology



Stanley Chang, M.D.

Visionary Leadership

The Gloria and Louis Flanzer Amphitheatre

IT IS A THURSDAY AFTERNOON and residents are arriving for weekly Grand Rounds in the new Gloria and Louis Flanzer Amphitheatre on the seventh floor of the Harkness building at 165th Street. With 72 seats, the amphitheatre's warm hues bring comfort to a stimulating environment that is simultaneously spacious and intimate. The gradually inclining floor ensures an unobstructed view from each seat.

"This beautiful new facility is used every day of the week, from morning until evening," notes Dr. John Flynn, Chief of Pediatric Ophthalmology and Vice Chairman of the Department of Ophthalmology. "It is the 'Taj Mahal' of intimate lecture facilities—the audio/visual equipment is absolutely state-of-the-art."



con't. page 14 Mr. and Mrs. Louis Flanzer

Flanzer Fellows

Studying with the Best to Make a Difference

OSMAN CEKIC, M.D., PH.D., one of two Flanzer Fellows, began his one-year fellowship in the Department of Ophthalmology in July 2003. Educated in Turkey, his native country, he received his M.D. from Hacettepe University Medical School in 1990. After his ophthalmology residency at Ankara University Hospital, he taught at Inonu University Medical School until 1998 and then moved to Osaka, Japan, for postgraduate studies. He



Dr. Osman Cekic

received a research fellowship and then his Ph.D. in vitreo-retinal surgery at Osaka University Medical School. Dr. Cekic felt strongly about continuing his education at Columbia University under Dr. Stanley Chang.

"At Columbia, I have an opportunity to perform every kind of retinal treatment, from macular and other retinal surgery to photodynamic laser therapy," he notes.

con't. page 6

Legacy of Leadership (con't.)



Dr. Stanley Chang with Dr. A. Gerard DeVoe.

The newly-endowed Directorship is named in honor of both Dr. A. Gerard DeVoe and Dr. B. Doblí Srinivasan. Dr. DeVoe, professor emeritus and former chairman of the Department of Ophthalmology, established a basic and clinical corneal research center at the Harkness Eye Institute in 1961, the first of its kind in the United States. During his tenure as chairman of the department, Dr. DeVoe sustained a deep commitment to the eye clinic that serves the Washington Heights community [see *Caring for the Community*]. Dr. B. Doblí Srinivasan, professor of clinical ophthalmology and current director of the eye clinic, trained under the highly respected Dr. DeVoe and is a recognized leader in the field of ophthalmology. Dr. Srinivasan will hold the inaugural directorship.

"Rand and Jessie Araskog understand the importance of our commitment to those in

need of technologically advanced eye care," Dr. Stanley Chang explains. "By endowing this directorship, the Araskogs have guaranteed that the department will be able to continue to provide high quality ophthalmology care and services to the medically underserved adults and children from the neighboring Washington Heights community."

Rand Araskog became a patient of Dr. DeVoe in the mid-1970s for a cataract in his right eye. "At that time, Dr. DeVoe was one of the most recognized doctors at the Harkness Eye Institute and perhaps in the country. It was a critical point in my career and my needs were handled superbly—both in confidentiality and with the exceptional outcome of the surgery. I simply couldn't trust my vision to anyone less skilled," he recalls. "Dr. DeVoe's professional exterior belied his true inner kindness. He felt all of his patients were equally important."

Over the next several years, Mr. Araskog continued to see Dr. DeVoe for follow-up appointments, and was gradually introduced to Dr. Srinivasan. "It was clearly a mentoring relationship—Dr. DeVoe was Dr. Srinivasan's mentor and inspiration," he recalls.

In the mid-1980s, during Mr. Araskog's tenure as Chairman and CEO of ITT, he began to develop a similar problem in his left eye. In 1988, he had surgery in that eye, this time with Dr. Srinivasan. The incision was nearly undetectable and his resulting vision was impeccable. He went on to have a repeat surgery in his right eye to take advantage of advances in treatment. Although a different surgeon performed that procedure in Palm Beach, it was done in careful consultation with Dr. Srinivasan.

con't. next page

Legacy of Leadership (con't.)

"Dr. Srinivasan has always been extremely thorough, cautious and conservative," Mr. Araskog observes. "His belief is that a sighted eye is a gift, and the potential benefits and risks of any surgical procedure should be considered carefully. I trust his judgment implicitly."

With gratitude for the successful surgeries that have preserved his sight, Mr. and Mrs. Araskog decided to make a significant gift in honor of Dr. DeVoe and Dr. Srinivasan. With a chuckle, Mr. Araskog recounts how the two doctors' respect for one another influenced the naming of the directorship.

"Dr. Srinivasan requested that Dr. DeVoe's name appear first," Mr. Araskog recalls. "But Dr. DeVoe wrote a persuasive letter to Dr. Chang insisting rather that Dr. Srinivasan should receive the honor. I settled the matter—I told Dr. Chang that I would like to have Dr. DeVoe's name placed first, in recognition of his tremendous contributions to the field of ophthalmology, but especially because I knew that Dr. Srinivasan really wanted his mentor's name to be ahead of his." And so the directorship was named.

From History To Legacy

"The relationship between the Araskogs and the Department of Ophthalmology at Columbia goes back some 30 years," Dr. Srinivasan notes. "What began as a typical doctor-patient relationship grew into a long-term interest in our community service activities."

In 1990, Dr. Chang's predecessor formed the department's Advisory Board with the intent

of forging connections among friends, former patients, physicians and scientists to promote the exciting research and clinical work of the department. Rand Araskog was invited to become one of the founding members of the Advisory Board at that time.

Rand Araskog explains his interest. "I accepted the invitation to join the Advisory Board because I believed so strongly in the impact of the research and clinical work that was taking place."

Simultaneously, ITT was investing philanthropically in a variety of community initiatives, including those assisting urban children and families.

About a year later, Columbia's ophthalmology department received a gift of \$1.5 million

con't. page 6



Dr. Srinivasan examines a clinic patient.

Legacy of Leadership (con't.)


from ITT to refurbish the eye clinic facility, which was in dire need of capital renovations and improvements.

"The congruence of ITT's corporate philanthropy with the obvious renovation needs of the eye clinic was truly serendipitous," remarks Mr. Araskog. "While I certainly played a role in bringing the needs of the eye clinic forward, it was ITT's community relations experts that decided that a gift would benefit the corporation's philanthropic goals. Needless to say, I was and still am pleased with the outcome. I believe the grant's employment by the Harkness Eye Institute represents the very best result of corporate philanthropy."

Dr. Srinivasan adds, "Thanks to ITT, we were able to upgrade our facilities to offer a higher level of care and comfort to the community—something that would not have been possible otherwise. The renovations were driven by the training needs of the residents and the sheer volume of patients and breadth of treatment needs. We are deeply grateful for the trust and confidence the Araskogs have shown with their personal support of the clinic, and I am humbled by their incredible generosity."

Dr. Gerald D. Fischbach, executive vice president for health and biomedical sciences and dean of the Faculty of Medicine at Columbia University, concurs. "The Araskog's recent gift recognizes the excellence that defines this department's superb faculty and cutting-edge research, as well as the need for and effect of the ambulatory eye clinic in the surrounding community. We are grateful to Mr.

and Mrs. Araskog for their generosity and support."

"Jessie and I believe in sharing one's time and resources whenever possible. It is gratifying to know that our gift will help maintain access to advanced eye care for people in the Washington Heights community," says Mr. Araskog. With gratitude, he adds, "I have received absolutely the best care possible at the Harkness Eye Institute. And, I retain 20/20 vision in both eyes. What a gift!" 

Flanzer Fellows (con't.)

Dr. Cekic is especially interested in age-related macular degeneration (AMD). Explaining his work, Dr. Cekic continues, "In Japan, surgical macular relocation is used as a treatment for exudative (wet) AMD. It is an effective but invasive procedure that involves rotating the macula around the optic disk and then reattaching it in a way that will improve the patient's vision. Here, the approach is more conservative—we are using photodynamic laser therapy to target and seal blood vessels beneath the macula to prevent further blood vessel growth. This approach, combined with intravitreal steroid injections, has proven to be as effective as macular translocation, and is inherently less invasive."

Dr. Cekic works in several CUMC locations, including the Flanzer Eye Center, the retinal clinic in the department's community eye clinic, St. Luke's-Roosevelt Hospital and with Columbia Ophthalmology Consultants on 71st Street. He typically sees at least 30 new

con't. page 12

Caring for the Community

The ITT Eye Clinic at CUMC

PATIENTS WAIT to be summoned in a bustling seating area inside the ITT Eye Clinic of the Harkness Eye Institute, while those who have just stepped out of the elevator queue up to check in with one of the three receptionists. Every few moments, a new patient is escorted through the double doors that lead to the fourteen examining rooms.

Inside, Dr. B. Doble Srinivasan, the ITT Eye Clinic director since 1990, reviews every medical chart, and alternately quizzes residents and answers questions on topics related to their patients.

“We serve upwards of 20,000 adults and children each year, primarily from the surrounding Washington Heights community,” explains Dr. Srinivasan between phone calls, charts and questions. “Many patients have no other access to vision care. Their needs range from routine eye exams to complex surgery. Our residents spend three years learning in this environment, supervised by top-notch attending ophthalmologists. They rotate through the general clinic as well as the glaucoma, retinal, uveitis, laser, corneal and pediatric specialty clinics. Our goal is to turn out ethical, knowledgeable and skilled ophthalmologists capable of providing the best eye care possible.”



Dr. B. Doble Srinivasan and Dr. Grace Lee, Chief Resident, in the ITT Eye Clinic.

Dr. Grace Lee, Chief Resident, comments, “The clinic provides the foundation for our ophthalmologic career. We learn how to do eye exams and different procedures and how to juggle ten things at once. We also learn how to interact with patients (often in Spanish!) and with the attending physicians.”

Dr. Lee continues, “Dr. Srinivasan, with his knowledge and experience, is an ever-constant presence in the clinic. Although we

learn efficient clinic operations, his focus always is on ensuring high quality residency training and providing superior patient care.”

Dr. Stanley Chang offers his view. “The people of Washington Heights entrust their vision to us. Dr. Srinivasan, our attending physicians and our residents take that trust and responsibility very seriously. It is a tremendous hands-on learning experience for our residents, and we are grateful for the opportunity both to teach and to serve.”

Dr. Lee is quick to point out how the residents learn from their patients. “It is gratifying to know we are helping people who have no insurance and few other resources, but honestly, I believe we are the ones who benefit the most. Our patients are the best part of the clinic. They teach us about patience, trust, endurance and friendship.”



Successful First AMD Conference

THE FIRST CONFERENCE at CUMC specifically focused on age-related macular degeneration (AMD) was hosted in mid-March by the Department of Ophthalmology and organized by Stanley Chang, M.D., Rando Allikmets, Ph.D. and Janet R. Sparrow, Ph.D.



K. Langton

Paul A. Sieving, M.D., Ph.D., Director of the National Eye Institute

AMD is a complex disorder involving both genetic and environmental factors, and is the leading cause of visual impairment afflicting a growing segment of the elderly population.

“Our goal was to gather top vision scientists and ophthalmologists to discuss current

hypotheses regarding the role of RPE lipofuscin, drusen, immune factors and light exposure in the pathogenesis of this devastating eye disease,” says Janet Sparrow, Ph.D.,

con't. page 10


AMD Conference Sponsors

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Visionary Lum

Gerstner Clinical Research Center

WORK IS NEARLY COMPLETE on the Louis V. Gerstner, Jr. Clinical Research Center in Vision. Occupying the entire fifth floor of the Harkness Eye Institute building, the new state-of-the-art facility is a result of three extraordinary gifts from the Louis V. Gerstner, Jr. Foundation, Russ and Angelica Berrie and The Starr Foundation. Russ and Angelica Berrie's gift has established The Russell Berrie Diabetic Retinopathy Research Unit within the Gerstner Center, which is part of The Berrie Family Diabetic Retinopathy Program, a cooperative effort between the Naomi Berrie Diabetes Center and the Department of Ophthalmology. The Starr Foundation has underwritten The Starr Foundation Retina Research Unit.

Collectively, these three clinical research programs create a multi-faceted research center dedicated to clinical study of a variety of vision problems, especially those affecting the retina. Look for more about the Gerstner Center in the next issue of *Viewpoint!* 

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Dr. Max Forbes To Be Honored At Conference

DR. JAMES TSAI IS ORGANIZING the Department of Ophthalmology's next scientific conference on glaucoma, scheduled for September. The two-day conference will honor Dr. Max Forbes' contributions to glaucoma and ophthalmology.

The conference, entitled "New Frontiers in Clinical Glaucoma," will be held on Friday, September 10 at the New York Academy of Medicine and on Saturday, September 11 at the Columbia University Medical Center campus.

The invited speakers and faculty include internationally-renowned specialists as well as regional glaucoma experts. Dr. George Spaeth from Wills Eye Hospital will be delivering the inaugural Max Forbes Lectureship in Glaucoma.

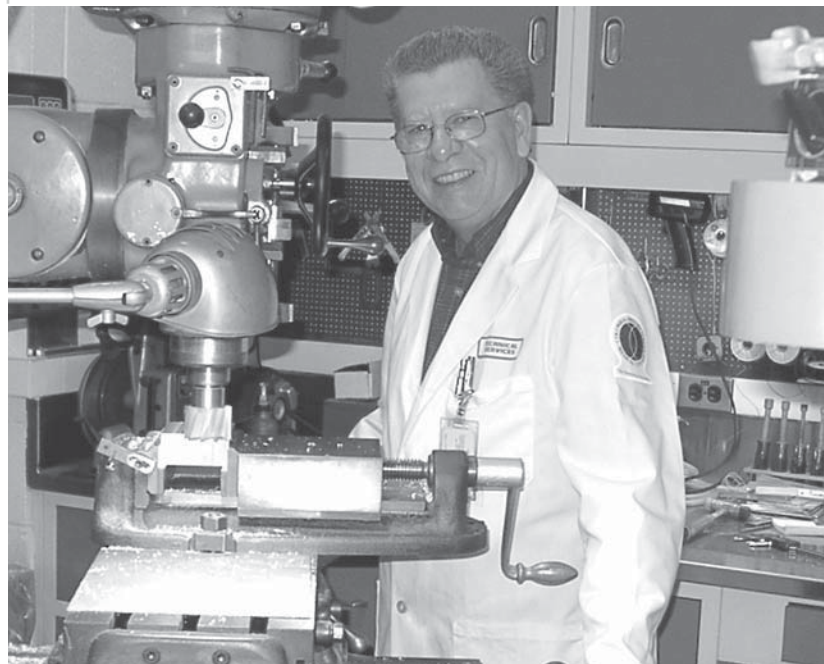


Fitting the Pieces Together

TOM HILL enjoys working at Columbia. With 37 years of experience in private industry under his belt, most recently at Dynacast, Tom has returned to his roots in milling and machining since joining the CUMC staff in June 2003. His engineering expertise and affable personality make him the "go-to" man when doctors and scientists in the ophthalmology and neurobiology departments need a specialized or retrofitted piece of equipment for their cutting-edge research.

"When one door closes, another one opens," Tom reflects. "When Dynacast decided to move south, my wife and I chose to stay, since Yorktown Heights is our home. Shortly after, I ran into a colleague who told me about this position—and here I am!"

con't. page 14



Tom Hill in his workshop.

Protecting Your Eyes From AMD

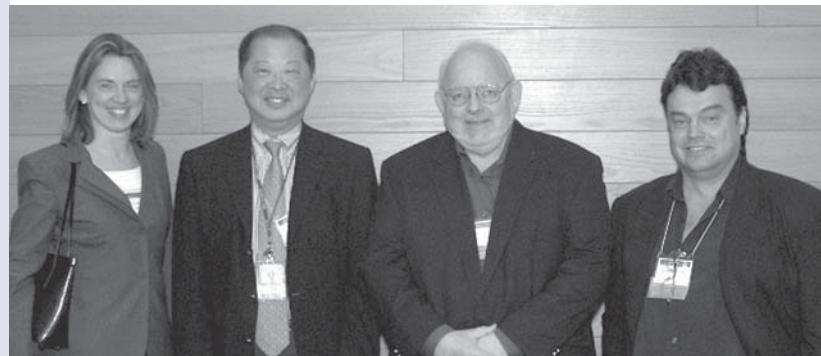
Although scientists believe there is a genetic component to one's risk of developing AMD, here's how you can reduce your environmental risks:

- ☞ **Have your eyes examined annually**, especially if you are over 65.
- ☞ **Eat a nutrient-rich diet.** Your eyes will benefit from the antioxidants found in dark, leafy green vegetables such as spinach and kale (with the carotenoids lutein and zeaxanthin) and tomatoes (lycopene).
- ☞ **Take daily vitamin supplements** rich in antioxidants such as vitamins C and E, beta-carotene and lutein. Trace minerals such as zinc, selenium and copper may be beneficial (if not contraindicated by other health conditions). Zinc is not advised for patients who are taking blood-thinning medications such as Coumadin®.
- ☞ **Wear large, yellow-tinted sunglasses** to block the sun's damaging ultraviolet rays and reduce exposure to blue light.
- ☞ **Quit smoking.** Smoking can increase your risk of developing AMD.

AMD Conference (con't.)

Director of the Retinal Cell Biology Laboratory and an associate professor of ophthalmic science at CUMC. "We discussed therapeutic preventive and treatment options ranging from vitamin and antioxidant supplements to emerging interventions involving small molecule drugs and gene therapy. We also received updates on recent progress in combating the neovascular form of AMD and existing clinical trials."

Matthew LaVail, Ph.D., gave the Smelser Lecture titled "Experimental Pharmaceutical and Gene Therapy for Retinal Degenerations." Distinguished guest faculty formed a veritable "Who's Who" of American, Canadian and British ophthalmologists. ☞



Matthew LaVail, Ph.D., (2nd from right) flanked by CUMC ophthalmology faculty and AMD organizers (left to right) Janet Sparrow, Ph.D.; Stanley Chang, M.D.; Rando Allikmets, Ph.D.

K. Langton

Martin Friedlander, M.D., Ph.D., Scripps Research Institute (left), with Lawrence A. Yannuzzi, M.D., Vice Chairman and Director of Retinal Services, Manhattan Eye, Ear & Throat Hospital.



K. Langton

World-Class Talent (con't.)

"Our three newest assistant professors, as well as the two Flanzer Fellows, possess the enthusiasm, creativity, compassion and razor-sharp intellect for which Columbia is known," says Dr. Stanley Chang with pride. "Each one brings the expert knowledge, stellar skills and cutting-edge research interests that our students, patients and colleagues expect from Columbia faculty. As their careers develop and progress, each one will become an ambassador of good will and good health. It is a pleasure to introduce and welcome them to our community."

Lama Al-Aswad, M.D.

"Congenital and pediatric glaucoma is often under-diagnosed. Untreated, it can cause children to become legally blind," explains Dr. Lama Al-Aswad. "Because the disease can be difficult to control, early detection and appropriate treatment—usually surgical—is critical to preserving sight for these children."

Dr. Al-Aswad is one of three new assistant professors who received their faculty appointments to the Department of Ophthalmology in 2003. A native of Syria, Dr. Al-Aswad earned her M.D. from Damascus University Medical School. She came to the United States in the mid-1990s for an ophthalmology research fellowship at the Massachusetts Eye and Ear Infirmary through Harvard Medical School, and subsequently interned at the Boston University

School of Medicine. She completed her ophthalmology residency and served as Chief Resident at the State University of New York at Brooklyn. Prior to coming to Columbia, Dr. Al-Aswad completed an adult and pediatric glaucoma fellowship at the University of Tennessee Health Science Center in Memphis.

"My interest in glaucoma, and especially pediatric glaucoma, attracted me to Columbia. There are few institutions in the country that specialize in this area. Columbia



C. Manley

Dr. Lama Al-Aswad

is among the most cutting-edge, particularly with regard to surgical procedures and clinical trials," says Dr. Al-Aswad. She specializes in laser treatments and every type of glaucoma surgery, from incisional surgery to shunt implants. In recognition of her clinical expertise, Dr. Al-Aswad was selected to contribute a chapter on laser treatment for glaucoma that was published in the most recent edition of

"The Clinical Guide to Glaucoma Management," an instructional textbook used by general ophthalmologists worldwide. She is planning a new clinical trial of anti-fibrotic medications to prevent scar tissue from forming over the glaucoma drainage implant "bleb," the reservoir for the excess fluid that is surgically created over the implant.

"Glaucoma is a life-long disease for which we have treatments, but not a cure. In adult patients, we can manage the disease and slow its progression over time. Pediatric glaucoma

con't. page 13

Flanzer Fellows (con't.)

and current retina patients each day and assists all the retina specialists including Dr. Chang, Dr. Del Priore, Dr. Schiff and Dr. Barile.

"Overseas, Dr. Chang is one of the most respected and well-known American ophthalmologists. His visits to my country and to Japan convinced me that I wanted to study under him at Columbia University," says Dr. Cekic with admiration. "I am grateful for this opportunity, and thankful to Mr. and Mrs. Flanzer for making this fellowship possible."

Dr. Cekic completes his fellowship at the end of June, and will return to Turkey to practice and teach as an assistant professor of ophthalmology at Suleyman Demirel University in Sparta.

Michael Ober, M.D.

Michael Ober, M.D., received his undergraduate degree in chemistry from Cornell University in Ithaca, NY, and went on to earn his M.D. from Wayne State University School of Medicine in Detroit.

Upon completion of his residency in ophthalmology at Cornell University Medical Center at New York-Presbyterian Hospital, he was selected for one of the most prestigious retina fellowships in the United States—a two-year cooperative fellowship in vitreo-retinal surgery with both the Edward S.

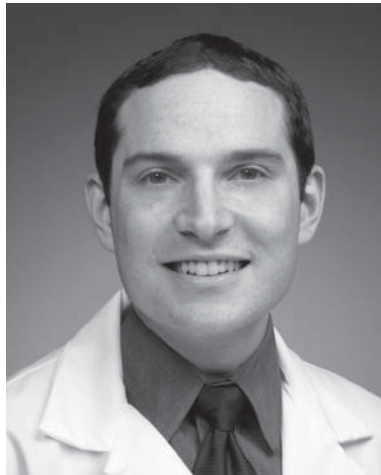
Harkness Eye Institute at Columbia University's College of Physicians and Surgeons and Manhattan Eye, Ear and Throat Hospital. (Retina fellowships are extremely competitive—in New York there are only two.)

Having just completed six months at Manhattan Eye, Ear and Throat Hospital, Dr. Ober began his year-long Flanzer Fellowship, in January of this year. Next January, he will complete the remaining six months of his fellowship at Manhattan Eye, Ear and Throat Hospital.

"I spend most of my time working with Dr. Chang, Dr. Barile, Dr. Schiff and Dr. Del Priore—seeing patients in the Flanzer Eye Center, assisting with surgery, and working in the lab," Dr. Ober explains. "At Columbia I have the opportunity to learn all aspects of a

medical and surgical retinal practice, from the management of age-related macular degeneration to the surgical repair of complicated retinal detachments. The schedule is intense, but the opportunity to learn is invaluable."

"I am grateful and feel very lucky to have been selected for this fellowship. Working with Dr. Chang is a 'once-in-a-lifetime' opportunity," says Dr. Ober. "Knowing that the Flanzers care so much about advancing the field of ophthalmology and Columbia's program makes it even more extraordinary. It is truly an honor to have been entrusted with this special gift."



Dr. Michael Ober

C. Manley

World-Class Talent (con't.)

is very rare, but in these cases, the risk of blindness is much greater because we have to manage the disease from childhood on through adulthood," explains Dr. Al-Aswad. "Sadly, many children go undiagnosed for too long. Educating pediatricians on the warning signs of congenital and pediatric glaucoma is key, since early diagnosis and expedited treatment can make a tremendous difference in helping these children retain their sight."

Michael Chiang, M.D.

"We are living in a time when technological advances have the potential to revolutionize medicine and healthcare delivery," Dr. Michael Chiang expresses with enthusiasm. "Columbia has the top biomedical informatics program in the United States."

Dr. Chiang is yet another of the department's newest assistant professors. He holds an undergraduate and two advanced medical degrees from Stanford and Harvard respectively, and completed his ophthalmology residency and a fellowship at Johns Hopkins' Wilmer Eye Institute. Dr. Chiang is now pursuing his passion for biomedical informatics with a fellowship at Columbia, in addition to teaching and specializing in pediatric ophthalmology and adult strabismus (crossed eyes).

Biomedical informatics is a broad term that describes the application of information

technology to medical practice and research. It encompasses a range of applications, from computerized patient records and charting systems to data collection and analysis for research. Telemedicine is one area of biomedical informatics of particular interest to Dr. Chiang. Diagnostic in nature, telemedicine allows physicians in different locations to share the digitized results of patients' test results via a secure and HIPAA-compliant internet connection, and receive expert diag-

nososes and treatment recommendations without leaving their offices.

Dr. Chiang is involved in a collaborative NIH-funded study with Columbia's Dr. John Flynn and several other ophthalmologists to design, implement and evaluate a computerized telemedicine infrastructure to screen for and diagnose retinopathy of prematurity

(ROP) in low birth-weight infants. Involving abnormal growth of blood vessels in the retina, untreated ROP will cause irreversible blindness in 50% of infants with the condition, while the remainder will suffer serious vision loss. ROP is the leading cause of childhood blindness worldwide—yet if it is detected within two months of birth, vision can be saved.

"The real tragedy with ROP is that it can be detected and laser-treated with excellent outcomes. Yet the ophthalmologic expertise necessary to screen premature infants is often found only at large academic centers, rather than at the hospital where the child is being



Dr. Michael Chiang


C. Manley

Flanzer Amphitheatre (con't.)

Residents attend classes and lectures in the Flanzer Amphitheatre Monday through Friday. On Thursday afternoons, residents attend Grand Rounds, in which respected physicians present analyses of real-life medical cases concerning specific diseases of the eye. A special fluorescein conference takes place every Thursday at 7:00 a.m., in which top surgeons, faculty and residents gather to review digital photographs of patients' retinas illuminated by fluoroscein angiograms.

"When residents experience Grand Rounds, observe a surgical procedure or participate in the weekly fluorescein conference in the Flanzer Amphitheater, the basic knowledge they've absorbed from lectures and medical texts comes to life," explains Dr. Stanley Chang, a long-time friend and physician to the Flanzers. "Gloria and Louis Flanzer have demonstrated tremendous generosity in renovating and equipping this incredible facility with such vivid technology."

From the podium at the front of the room, lecturers and guest speakers project their digital presentations to the 54-inch plasma screen. The experiential learning potential is deepened by live audio/video feeds from each of three surgical suites and multiple microscopes through which observers can closely view a slide or procedure in progress. A special headset allows the surgeon to hear and respond to observers' questions in real-time through a moderator without disturbing or alarming the patient.


"The Flanzers also have created two new clinical retina fellowships to support the work and education of talented young surgeons as they perfect their diagnostic and surgical skills here under our top retinal specialists," Dr. Chang continues. "These prestigious fellowships attract the most gifted young physicians practicing in the world today. The Flanzers' commitment to Columbia University Medical Center, and indeed, to the future of ophthalmology, is truly extraordinary, and deeply appreciated." 

Pieces Together (con't.)

Tom's approach to research is similarly matter-of-fact. "Usually, the researchers tell me what they would like the part to do, and then I make it," he says with modesty. "Sometimes they have a drawing of what they want. Other times, I listen to their ideas and create a part from that."

This creativity comes easily. Tom enjoys working with the machinery to mill plastic,

aluminum and steel parts, but can shift effortlessly to the computer on his desk.

"This software allows me to design just about anything," Tom explains. "It's exciting to be working in such a renowned research environment as Columbia, and I'm just glad that I can use my skills and knowledge to make a difference." 

World-Class Talent (con't.)

treated," explains Dr. Chiang. "In this study, we are working with neonatal medical staff at our partner institutions to capture images of infants' retinas with a special digital camera. Then they transmit the images to us via the internet for remote diagnosis."

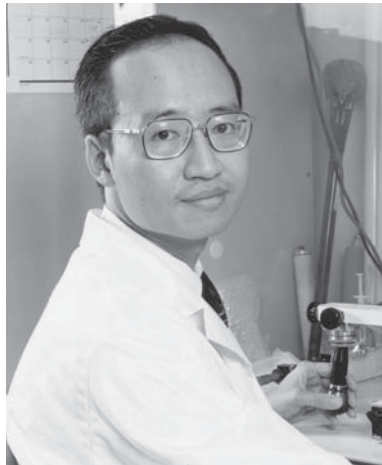
"In addition to allowing for expert diagnosis within the narrow treatment window, this option is less physiologically stressful to the infant," Dr. Chiang explains. "The potential benefits with respect to speed, outcome, cost and satisfaction are very exciting!"

Stephen Tsang, M.D., Ph.D.

"The retina is the most accessible part of the central nervous system for genetic and surgical manipulations," says Stephen Tsang, M.D., Ph.D., discussing his research. "In fact, the retina has been studied as a model system for the brain due to its similar organization, development and signaling pathways. Many neurotransmitters and hormones signal their target cells through cascades comparable to those of retinal rod and cone receptors, the cells responsible for night and day vision, respectively."

Dr. Stephen H. Tsang, a native of Hong Kong, is a recently-appointed assistant professor and the new Hoffman Scholar. A clinician-scientist trained in clinical ophthalmology and molecular biology research, he received both the M.D. and Ph.D. degrees at Columbia, mentored by Stephen Goff, Ph.D., a Howard Hughes Medical Institute scientist,

also at Columbia. Dr. Tsang completed his residency at the Jules Stein Eye Institute at UCLA. More recently, Dr. Tsang has been working with Professor Alan Bird of Moorfields Eye Hospital in London on improving the care of individuals with macular disorders and retinitis pigmentosa. Dr. Tsang's retina program is well-respected and he has received several grants in support of his research from the National Eye Institute, Research to Prevent Blindness, Fight For Sight/Prevent Blindness America, Foundation Fighting Blindness, Burroughs-Wellcome, the American Geriatrics Society and Hirschl Trust, among others. Currently, he is a member of the Fight-For-Sight grant-in-aid review panel.



Dr. Stephen Tsang

C. Martin, JSEI

Dr. Tsang is collaborating with long-time friend and Columbia colleague Dr. C.S. "Victor" Lin [see *Viewpoint: Holiday 2003*]. This NIH-funded research

project involves engineering a genetic switch that may help to regulate the timing and amount of therapeutic genes in the human retina.

"As a geneticist at Columbia, I have immense opportunities to integrate clinical practice and fundamental research," says Dr. Tsang. "The University-patented genetic engineering technology has changed the standard of care for many patients. I am grateful for Dr. Chang's leadership and the opportunity to collaborate with such talented and diverse colleagues as we work to apply genetic discoveries to ophthalmic disease and to educate our students who will become future leaders in medicine."

Viewpoint

The Department of Ophthalmology & The Edward S. Harkness Eye Institute at
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