



Department of Ophthalmology
and Visual Sciences
Pomerantz Family Pavilion
University of Iowa Hospitals and Clinics
<http://webeye.ophth.uiowa.edu>

Nov. 2003, Series 2, No. 38

Greenlee and Goins Join Faculty



Emily C. Greenlee, MD

Emily C. Greenlee, MD, is a new Associate. She is involved in patient care and teaching in both the Glaucoma Clinic and the Comprehensive Ophthalmology Clinic.

Dr. Greenlee did both her residency and glaucoma fellowship at the University of Iowa. She has a Bachelor of Business Administration from the University of Notre Dame. She was in the Post-Baccalaureate Pre-Health Professions Program at Loyola University of Chicago, earned her M.D. from Indiana University School of Medicine, and did her internship at the University of Iowa Hospitals and Clinics. Her husband, Jeremy, is the Chief Resident in Neurosurgery at UIHC this year.



Kenneth M. Goins, MD

Kenneth Goins, MD, joined the faculty of the Cornea and External Disease Service in late July. He comes to the University of Iowa from the University of Chicago. Dr. Goins has a BA degree in Organismal and Systems Biology from the University of Tennessee at Knoxville and earned his M.D. from the University of Kentucky in Lexington, where he also did his internship and ophthalmology residency. He was a fellow in cornea and external disease at Duke University Eye Center at Durham, North Carolina. While at Chicago, he helped develop the cataract surgery program, becoming the primary teacher of phacoemulsification. He made a large contribution in markedly

lowering the cataract complication rate.

Besides participating in patient care and teaching in the Cornea and External Disease Service, his goals at the University of Iowa are to work on research projects including deep lamellar endothelial transplantation (DLEK) for posterior corneal disorders (i.e. Fuchs' dystrophy, posterior polymorphous dystrophy, and iridocorneal endothelial syndrome) and the use of the Alpha-Cor artificial cornea, a new type of keratoprosthesis made for patients

Continued on page 2

INSIDE

Bioinformatics Grant	2
Scott Honored	2
Braun & Scheetz	3
Faculty News	4-7
CarverLab	8
ILEB Ames Office	9
ConfoScan Grant	9
Laser Vision Center	9
Visiting Researchers	10-11
House Staff News	
Graduates	12
New Residents	13
New Fellows	14
Alumni	15
Opportunities for Giving	16-17
AAO Meeting	18
Update from the Chair	19
Calendar	20

Bioinformatics Center Signs Contract with Alcon Research

Goins

Continued from page 1

who are at high risk for corneal transplant rejection. He plans to continue his previous work in the use of Morcher endocapsular tension rings for patients with lens subluxation and zonular weakness, use of the Morcher black iris diaphragm aniridia implant for patients with partial or complete iris defects, and the use of Intacs for keratoconus. He also plans to continue his investigations into the ocular applications of Minoxidil in the prevention of posterior capsular opacification and to reduce corneal haze after excimer laser surface ablations.

The Center for Bioinformatics and Computational Biology (CBCB) signed a five-year, \$1.5 million contract with Alcon Research, Ltd. in January, for two projects to help identify the causes of glaucoma, leading to better diagnosis and treatment of the disease.

The first project, whose principal investigator is Terry Braun, Assistant Professor of Ophthalmology & Visual Sciences and Biomedical Engineering, involves developing a novel bioinformatics system to identify potential glaucoma therapeutic targets and to accelerate mutation screening of glaucoma candidate genes. This new system will annotate and manage all gene-associated data, help identify and prioritize glaucoma candidate genes and identify potential therapeutic targets.

The second project, whose principal investigator is Dr. Beverly Davidson, Professor of Internal

Medicine, involves gene transfer to discover and characterize pathways involved in human glaucoma.

The relationship between the University of Iowa and Alcon Research, Ltd. dates back to a 1993 collaboration with the UI's Molecular Ophthalmology Laboratory (MOL), directed by Dr. Edwin Stone, which was extended in 1998 to include the Coordinated Laboratory for Computational Genomics (CLCG) headed by Dr. Braun.

The CBCB is a joint enterprise of the University of Iowa College of Engineering and the Roy J. and Lucille A. Carver College of Medicine, and works to cooperate with other units, including the UI Center for Macular Degeneration. The CBCB is directed by Dr. Tom Casavant, who has a secondary appointment with the Department of Ophthalmology.

Dr. William E. Scott named "Guest of Honor" for 2003 American Academy of Ophthalmology Annual Meeting

Dr. William E. Scott has been named a Guest of Honor for the 2003 American Academy of Ophthalmology Annual Meeting in Anaheim, California.

Dr. Scott joined the Ophthalmology faculty in 1971 after receiving B.S., M.S., and M.D. degrees from the UI. He is the founding director of the Pediatric Ophthalmology and Adult Strabismus Service, which is recognized as one of the nation's leading training programs for residents and fellows. He served as the

Department's vice chair from April 1995 to September 2001. Throughout his career, Dr. Scott has emphasized the importance of combining clinical care and education with his research, treating many children while simultaneously training the pediatric ophthalmologists of tomorrow. To honor this accomplished teacher, scholar, and clinician, the William E. Scott Chair for Education in Pediatric Ophthalmology was established in 2001 with a generous anonymous gift of more than \$1.5 million.



William E. Scott, MD

Braun and Scheetz Appointed as Assistant Professors of Ophthalmology & Visual Sciences

An interdisciplinary approach has been embraced by bioinformatics collaborators and has created groundbreaking research in the area of applied computational science within genomics, genetics, and molecular biology. These efforts have included high-throughput genotyping, web-based tools for genetic linkage analysis, cDNA/EST sequencing, gene discovery and mapping, and micro-array hybridization and gene expression. Among the collaborators in this team approach are Todd Scheetz, PhD, and Terry A. Braun, PhD, who now have primary appointments as Assistant Professors in the Department of Ophthalmology and Visual Sciences.

Terry A. Braun, PhD

Dr. Braun is an Assistant Professor of Ophthalmology & Visual Sciences and Biomedical Engineering, and is the Director of the Coordinated Laboratory for Computational Genomics (CLCG). He holds a master's degree from the University of Iowa in Electrical and Computer Engineering and a PhD from the University of Iowa in Genetics. The CLCG applies computational techniques and algorithms to large-scale problems in biology, genetics, and medicine. The CLCG has on-going research efforts in gene discovery, micro-array infrastructure development, and disease gene prioritization and identification in multiple disorders. Currently, Braun is developing bioinformatic resources to accelerate mutation identification for disease gene identification. This involves modeling sequence features and annotation for use in inferring the potential for pathogenicity in gene sequences (coding and non-coding). His research interests also include modeling higher-order chromosomal features.



Terry A. Braun, PhD



Todd E. Scheetz, PhD

Todd Scheetz, PhD

Dr. Scheetz is an Assistant Professor of Ophthalmology and Visual Sciences and a member of the Center for Macular Degeneration (CMD), the Center for Bioinformatics and Computational Biology (CBCB), and the Holden Comprehensive Cancer Center (HCCC). He earned a master's degree from the University of Iowa in Electrical and Computer Engineering (1995) and a PhD from the University of Iowa in Genetics (2001). For his PhD thesis, he was mentored by Drs. Thomas Casavant, M. Bento Soares, and Val Sheffield working on an NIH-funded project aimed at developing new resources for the laboratory rat. During this time, he created chromosome-spanning genetic framework maps. He has also created comparative maps between rat and mouse, and between rat and human, identifying 50 syntenic segments between rat and mouse, and 132 between rat and human. Since receiving his PhD in May 2001, he has worked on a variety of gene discovery, annotation, and expression analysis research projects.

FACULTY NEWS

Thomas A. Weingeist, PhD, MD, will be honored at the 2003 American Academy of Ophthalmology Annual Meeting in Anaheim, California with a Life Achievement Honor Award for his contribution to the Academy, its scientific and educational programs and to ophthalmology. In December, Dr. Weingeist ends his term as Past-President and member of the Board of Trustees of the Academy which he began in 1992. He has participated in courses, symposia, educational and scientific exhibits at AAO annual meetings since 1968 when he gave a course with the late George Smelser, PhD, on the ultrastructure of the eye and adnexa.

Sara L. Butterworth, OD, was named the Young Optometrist of the Year for the State at the Iowa Optometric Association 2003 Annual Congress. Dr. Butterworth was also named a Fellow of the American Academy of Optometry in December, 2002.

Ronald V. Keech, MD, received the Walt and Lilly Disney Award for Amblyopia Research in the amount of \$25,000 from Research to Prevent Blindness (RPB). The RPB Disney Awards for Amblyopia Research are meant to stimulate, strengthen, and promote research to improve the diagnosis and treatment of amblyopia. The grants are offered to exceptional ophthalmic scientists in pursuit of research of unusual significance and promise in this area. Dr. Keech is one of two scientists selected to receive the award in 2003.

Gregory S. Hageman, PhD, delivered the XIIth Craig Lecture at the Queen's University, Belfast (QUB), on September 12, 2003. Dr. Hageman's lecture was entitled "The role of inflammation in the etiology of age-related macular degeneration." James A. Craig, MB, FRCS, Consultant Ophthalmologist in Belfast, endowed the Craig Lecture in the early part of the 20th Century. The lecture was delivered during the QUB's Ophthalmic Research Centre Inauguration in association with the QUB Department of Ophthalmology 6th Alumni Day meeting.

Dr. Hageman has been awarded a supplement of nearly \$400,000 on his NIH R01 grant "Age-Related Maculopathy: Cellular and Molecular Analyses". The money will be used for the purchase of an Olympus Fluoview FV500 laser scanning confocal

microscope. The microscope will facilitate studies by Dr. Hageman and his colleagues that are directed towards identifying genes and pathways associated with the development of age-related macular degeneration, a leading cause of blindness worldwide. The microscope will be particularly useful in assessing the distribution of proteins and other molecules in eyes that are obtained from donors with and without this devastating disease.

Sohan Singh Hayreh, MD, MS, PhD, FRCS, FRCOphth, DSc, visited India in January and February. He was the invited speaker at the All India Ophthalmological Society Annual Conference in New Dehli, the International Ophthalmic Conference on Eye Trends at Coimbatore, India, and the Annual Congress of the Vitreo-Retinal Society of India in Chandigarh, India. He delivered a



Left to right: Ravinder Graham Singh Hayreh, Manmohinder Singh Hayreh, Sohan Singh Hayreh, Sant Manmohan Singh Hayreh, Davinder James Singh Hayreh.

Faculty News Continued on page 5

Faculty News

Continued from page 4

keynote address and lectures at the 50th Anniversary of the Indian Journal of Ophthalmology and at a symposium on Foundation of Ophthalmology in India. He also was invited to give lectures at the L.V. Prasad Eye Institute and the National Institute of Medical Sciences in Hyderabad. Dr. Hayreh also delivered the ARVO Weisenfeld Lecture in May. Dr. Hayreh was honored at the 2003 Annual Meeting of the Iowa Eye Association in June where he also delivered the Braley Lecture.

Robert F. Mullins, PhD, has received funding for a National Institutes of Health R03 grant. This is a three-year grant for \$100,000 direct costs per year and about \$441,000 total costs over the three years. The title of the proposal is: "The choriocapillaris in aging and macular disease." The goal of the proposal is to test the hypothesis that changes in immune function of the choriocapillaris are involved in the pathogenesis of age-related macular degeneration. This hypothesis will be addressed by examining gene and protein expression in human eyes with and without macular degeneration, as well as by developing cell culture and organ culture systems for choriocapillaris endothelial cells.

Thomas A. Oetting, MD, has been selected to be on the ABO and AAO knowledge base panel for cataract and anterior segment surgery. This panel will join others to develop the recertification knowledge base.

Stephen R. Russell, MD, as a visiting faculty for Project Orbis, made a trip to the Vietnam National Institute of Ophthalmology (VNIO) in Hanoi, Vietnam. His aim was to provide instruction on the surgical treatment of retinopathy of prematurity which has become epidemic in that country due to the increased survival of very premature infants. While there, he delivered five lectures and operated on seven complicated retinal detachment patients. He donated several books provided by the C. S. O'Brien Library including a two-volume set on ophthalmic surgery translated by Dr. Fred Blodi. Dr. Russell also donated an intraocular forceps and scissors to allow treatment of complicated retinal cases, as VNIO did not have these resources.

Edwin Stone, MD, PhD, recently received The Foundation Fighting Blindness "Trustee Award". The award is presented each year to the researcher who made the largest contribution in the fight against blindness. The "Trustee Award" serves as a symbol of research excellence in the field of retinal degeneration research. Dr. Stone was recognized for his contributions to the genetics of retinal degenerative disease.

Center for Macular Degeneration Director and Professor of Ophthalmology, **Edwin M. Stone, MD, PhD**, with collaborators, **Thomas L. Casavant, PhD**, and **Andrew Williams, PhD**, have won a 3-year \$771,000 grant from

the National Institutes of Health for a research project that uses artificial intelligence to search for inherited causes of blindness. Dr. Casavant is director of the UI Center for Bioinformatics and Computational Biology, professor of electrical and computer engineering and biomedical engineering and has a secondary appointment with the Department of Ophthalmology & Visual Sciences. Dr. Williams is assistant professor of electrical and computer engineering. The project is funded through the National Eye Institute, Biomedical Information Science and Technology Initiative (BISTI).

John E. Sutphin, MD, made a return trip to Haiti in January. **Liz Bulgarelli, RN**, made the Haiti trip for the first time this year. The mission this year was made under the auspices of the Christian Mission of Pignon, Inc.



The Iowa Academy of Ophthalmology has selected **Thomas A. Weingeist, PhD, MD**, Professor and Head of the University of Iowa Department of Ophthalmology and Visual Sciences, as Eye Health Advocate for 2003.

Faculty News Continued on page 6

Faculty News

Continued from page 5

Markus Kuehn, PhD, has been appointed as an Associate Research Scientist with the department. His work centers primarily on the cell biology of glaucoma but he also has an interest in the developmental biology of the retina. Together with Dr. Young Kwon and collaborators at Iowa State University, he utilizes an animal model to understand how increased intraocular pressure leads to ganglion cell death in the glaucomatous eye. A second research project focuses on the role of a retina-specific transcription factor in retinal development and why mutations in this factor give rise to Enhanced S-Cone Syndrome.



Markus Kuehn, PhD

Dr. Kuehn graduated from the Cell and Molecular Biology Program at St. Louis University in St. Louis and followed his mentor, Dr. Greg Hageman, to Iowa shortly before completion of his studies. Following graduation, he remained in Dr.

Hageman's lab as a post-doctoral fellow and engaged in studies towards identification of abnormal gene expression patterns that may be associated with the development of age-related macular degeneration.

Stephen R. Russell, MD, and **Gregory S. Hageman, PhD**, made a trip to Rapa Nui, Chile (Easter Island) in June. In 2002, Dr. Hageman started looking into a group of genes that he suspected might modulate human susceptibility to age-related macular degeneration (AMD). Studying this group of genes in a heterogeneous population, such as that found in the U.S., would be prohibitive. The group of genes is also human specific, so monkey studies would not suffice. Following a hunch he had, Dr. Hageman predicted that the natives of Rapa Nui would have no AMD. His hunch turns out

to be true. As Dr. Russell wrote in an email the day before returning "Having seen 550 natives and drawn blood for macular degeneration research on about half of the population over age 60, virtually none of them have drusen; none have exudative disease." Dr. Hageman explains that there were plenty of subjects in their 80's and 90's, making this an excellent population to study. The blood samples collected during the trip should help immensely in understanding one of the genetic perspectives of AMD. The trip has given him a lead on another tribe in Chile that could result in further

study. Dr. Rodrigo Poblete (former Iowa Oculoplastics Fellow) played a key role in Chile. Besides helping to work with the ethics committee and other regulating agencies in Chile, he managed to recruit seven people to volunteer a week of their time to help with the project.



Faculty News Continued on page 7

Faculty News
Continued from page 6

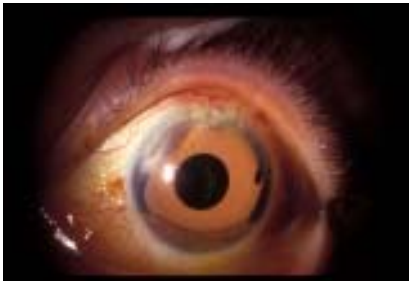
A. Tim Johnson, MD, PhD, and **Thomas A. Oetting, MD,** are participating in a study with Ophthtec Corporation in which they are placing iris reconstruction intraocular lenses. This device is

an artificial iris and intraocular lens combination that comes in four colors. They have had promising results. (see photographs below) Drs. Oetting and Johnson have also placed numerous capsular tension

rings as part of a study to obtain FDA approval for the Ophthtec Capsular Tension Ring. Approval is expected within the year.



Eye with cataract and damaged iris



Same eye post-operatively



2003 marks the 9th consecutive year that the University of Iowa Department of Ophthalmology and Visual Sciences has received the #6 ranking in the survey conducted by *U.S. News and World Reports* and the 12th consecutive year of being in the Top Ten. The rankings appeared in the July 28, 2003 issue.

Carver Lab Offers Genetic Tests for Eye Diseases

The Carver Laboratory for Molecular Diagnosis, part of the University of Iowa Center for Macular Degeneration, has initiated a program to conduct gene-based diagnostic tests for a number of rare ocular diseases. Gene tests still offer useful information to patients with potentially blinding disorders who can use the information to make smart decisions about the future.

Tests for rare, but potentially blinding, genetic disorders are not commercially feasible for large industry because the potential market is too small to make the effort profitable. As a result, the needs of these patients are not being met.

The Carver Laboratory, which is non-profit, plans to focus on the diagnosis of diseases that are not otherwise being diagnosed by commercial services or diagnostic products. There is a modest fee for these services, which reimburses the laboratory only for the actual cost of conducting the diagnostic procedure in the clinical facilities.

The University of Iowa has engaged in research-based genetic testing for rare eye diseases since 1990. This has been funded in part by an endowment from the Carver Charitable Trust and in part by a wide variety of research funds.

The Carver Laboratory for Molecular Diagnosis is ready to offer 24 non-profit tests for rare eye diseases (involving 31 genes) immediately – and another 10 to 20 in the next two years.

Dr. Stone, with colleague Dr. Val C. Sheffield, hopes to generate national interest in Washington, D.C. for extending the scope of the Rare Diseases Act to include affordable access to the intellec-



tual property necessary to perform tests for rare genetic disease. Dr. Stone presented these ideas on Capitol Hill in May 2003 and plans to continue to work on this issue until it is resolved in a manner that makes genetic testing for rare eye diseases widely available at a reasonable cost.

The August 29, 2003, *Wall Street Journal* carried an article

about Dr. Ed Stone and the effect of patent ownership on genetic testing. The article, written by Ron Winslow, was entitled “Researchers Have Plan for Genetic Eye Tests Ignored by Industry.”

About the Carver Lab

In 1996 the Roy J. Carver Charitable Trust of Muscatine, Iowa, contributed \$2 million to the

University of Iowa to create the Carver Endowment for Molecular Ophthalmology. The Department of Ophthalmology also contributed \$1 million to this endowment. The availability of this permanent endowment made it possible for the Molecular Ophthalmology Laboratory to develop a research-based genetic testing unit, known as the Carver Laboratory for Ophthalmic Molecular Diagnosis. Since its inception, the laboratory has received over 30,000 samples from more than 15 countries worldwide. The

availability of these samples has been critical to the success of the Carver Lab’s inherited eye disease research program, which to date has mapped and/or identified over 30 genes responsible for human disease.

Visit the Carver Lab’s website at <http://www.CarverLab.org/>

Iowa Lions Eye Bank Opens Satellite Office in Ames

After much anticipation and planning, the satellite office of the Iowa Lions Eye Bank officially opened in May in the Iowa Lions State Office Building at 2300 South Duff, Ames, Iowa.

In April, Kevin Sealy was employed as regional manager to establish operations of the new branch office. Kevin joins the staff of the eye bank with eighteen years of multi-faceted experience in the donation and transplantation field, having worked with several programs

in different states. He began his career as an apprentice embalmer and funeral director, and then developed a strong interest in forensic pathology. He joined the Oklahoma Lions Eye Bank in 1986 as a Certified Eye Bank Technician (CEBT). In 1988, he was recruited to fill the Technical Director's position for the Utah Lions Eye & Tissue Bank. He is also a Certified Tissue Bank Specialist (CTBS) through the American Association of Tissue Banks.

As regional manager, Kevin will begin recruiting and training in Ames for on-call recovery staff to help improve the quantity and quality of donated ocular tissue. One of his main goals on behalf of the Iowa Lions Eye Bank, is to cultivate productive working relationships with the numerous medical examiners, hospitals, funeral homes, and other healthcare agencies within the central Iowa region.

- Patricia Mason

Cornea Service Acquires ConfoScan

Lions Clubs International Foundation, The Lions of Iowa and the Iowa Lions Eye Bank funded a grant to purchase the new Nidek ConfoScan, a corneal confocal microscope, which precisely displays corneal layers. This system is computerized and generates digital images for easier analysis of infections, endothelial cell morphology and counts, and post refractive surgery changes. The microscope is used in research in determining the healing patterns in refractive surgery and corneal transplants. It is used in the diagnosis of dystrophies, in addition to the already well-known use in diagnosing *Acanthaemoeba* and fungal infections.

Lions Clubs International Foundation granted \$25,373 and The Lions of Iowa raised over \$11,000 toward the cost of the instrument.

Laser Vision Center Expands



The UI Laser Eye Surgery Center moved into new, significantly expanded quarters in April. This was the area formerly occupied by the Iowa Lions Eye Bank Laboratory. The expanded space allows for more storage space and additional room for observers.

The Center upgraded the equipment to the VISX Star S4 in the Spring. The VISX Star S4 now is able to customize the ablation based on wavefront detection by the Custom Vue machine.

Visiting Researchers



Dean Bok, PhD

Dean Bok, PhD, professor of biology and the Dolly Green Professor of Ophthalmology at the University of California at Los Angeles School of Medicine, is serving during his sabbatical from UCLA as the 2003 Helen C. Levitt Visiting Professor in the Department of Ophthalmology and Visual Sciences. The Levitt visiting professorship brings outstanding scholars from other institutions to the UI to lecture, consult with faculty and students, and devote time to research activities related to clinical care. Bok is working with Gregory Hageman, Ph.D. and Edwin Stone, M.D., Ph.D. Bok earned a doctorate in anatomy from the UCLA School of Medicine in 1968 and has been a member of its faculty since that time. He has served as a trustee of the Association for Research in Vision and Ophthalmology and received the Friedenwald Award from that organization in 1985. He served as a member of the Visual Disorders Study Section from 1982 to 1986 (chair from 1984 to 1986) and recently completed a four-year term of service on the National Advisory Eye Council. Bok's

research interests involve the cell and molecular biology of the retina in health and disease. His studies involve the interactions that take place between retinal photoreceptors and the retinal pigment epithelium (RPE) and how those processes are affected by inherited mutations that cause retinitis pigmentosa and macular degeneration. His contributions include the discovery of photoreceptor outer segment disc shedding, phagocytosis of these membranes by the RPE, the failure of this process in rat mutants (*rdy*), detection of membrane photoreceptors for the RPE and release of retinoids by the RPE, transgenic rescue of inherited degeneration in mice carrying the *rd5* mutation, and the modeling of the equivalent human disease in mice through the introduction of point mutations in the mouse *rd5* gene.

Some of Dr. Bok's recent publications include:

Stamer WD, Bok D, Hu J, Jaffe GJ, McKay BS. Aquaporin-1 channels in human retinal pigment epithelium: role in transepithelial water movement. *Invest Ophthalmol Vis Sci.* 2003;44(6):2803-8.

Bok D, Ruiz A, Yaron O, Jahng WJ, Ray A, Xue L, Rando RR. Purification and characterization of a transmembrane domain-deleted form of lecithin retinol acyltransferase. *Biochemistry.* 2003;42(20):6090-8.

Bok D. New insights and new approaches toward the study of age-related macular degeneration. *Proc Natl Acad Sci U S A.* 2002;99(23):14619-21.



Giuliana Silvestri, MD

Giuliana Silvestri, MD, is visiting Dr. Greg Hageman's Lab at the Oakdale Campus through December 2003. Dr. Silvestri is Senior Lecturer and Consultant Ophthalmic Surgeon for the Department of Ophthalmology of The Queen's University of Belfast (QUB) and the Head of Ophthalmology at QUB. She is also Programme Director for Ophthalmology for Northern Ireland, Regional Adviser for the Royal College of Ophthalmologists, and Adviser for Ophthalmology to the Postgraduate Council for Northern Ireland.

Some of Dr. Silvestri's recent publications include:

Lichanska AM, McGibbon D, Silvestri G, Hughes AE. A physical and expression map of the D17S1810-D17S1353 region spanning the central areolar choroidal dystrophy locus. *Cytogenet Cell Genet.* 2001;93(1-2):43-7.

Mallah MK, Hart PM, McClure M, Stevenson MR, Silvestri G, White ST, Chakravarthy U. Improvements in measures of vision and self-reported visual function after

Continued on page 11

Visiting Researchers (Continued)

Michael Abramoff, MD, PhD, will be working through mid-2004, with Dr. Randy Kardon and Dr. Young Kwon on the "Optical Functional Imaging of the Retina" project. Dr. Abramoff is from the University Hospital at Vrije Universiteit (Free University) in Amsterdam. He is a retina specialist as well as an epidemiologist, and a computer engineer. Some of Dr. Abramoff's recent publications include:

van Leiden HA, Moll AC, Dekker JM, Abramoff MD, Polak BC. Photography or ophthalmoscopy for detection of diabetic retinopathy? *Diabetes Care*. 2003 Apr;26(4):1318-9.

Abramoff MD, Viergever MA.

Computation and visualization of three-dimensional soft tissue motion in the orbit. *IEEE Trans Med Imaging*. 2002 Apr;21(4):296-304.

Abramoff MD, Kalmann R, de Graaf ME, Stilma JS, Mourits MP. Rectus extraocular muscle paths and decompression surgery for Graves orbitopathy: mechanism of motility disturbances. *Invest Ophthalmol Vis Sci*. 2002 Feb;43(2):300-7.

Abramoff MD, Ramos LP, Jansen GH, Mourits MP. Patients with persistent pain after enucleation studied by MRI dynamic color mapping and histopathology. *Invest Ophthalmol Vis Sci*. 2001 Sep;42(10):2188-92.



Michael Abramoff, MD, PhD

Silvestri

Continued from page 10

cataract extraction in patients with late-stage age-related maculopathy. *Optom Vis Sci*. 2001 Sep;78(9):683-8.

Stone EM, Lotery AJ, Munier FL, Heon E, Piguet B, Guymer RH, Vandenburg K, Cousin P, Nishimura D, Swiderski RE, Silvestri G, Mackey DA, Hageman GS, Bird AC, Sheffield VC, Schorderet DF. A single EFEMP1 mutation associated with both Malattia Leventinese and Doyme honeycomb retinal dystrophy. *Nat Genet*. 1999 Jun;22(2):199-202.



A. Hakan Durukan, MD

A. Hakan Durukan, MD, began working as an International Research Scholar in Vitreoretinal Surgery and Retinal Disease in August. He will be working with Dr. Stephen Russell in the Vitreoretinal Service until August of 2004. His main research project will involve the evaluation of a spectral fundus camera for retinal diseases. Dr. Durukan will also be working on other clinical and research projects as his time allows. Dr. Durukan is an ophthalmologist in Turkey and is employed by the Gulhane Medical Academy in Ankara, Turkey.

The Iowa Eye is published one to three times a year by the Department of Ophthalmology and Visual Sciences for friends and alumni of the department.
Editor-in-Chief: Thomas A. Weingeist, PhD, MD
Managing Editor: Trish Duffel, RPh, MA
Photos: Staff Photographers

Please direct comments and inquiries to managing editor:
319/356-2191 FAX 319/356-0357
trish-duffel@uiowa.edu
Full color electronic edition at
<http://webeye.ophth.uiowa.edu>

House Staff News

Resident Graduates

Michael Grassi, MD, has received a Heed Foundation Fellowship. He will remain at Iowa to complete a medical retina fellowship. He is also a graduate student in the laboratory of Dr. Edwin Stone and is working on his PhD in translational biomedical research.

Michael Hunt, MD, is remaining at the University of Iowa to complete a fellowship in Pediatric Ophthalmology.

John Kitchens, MD, has begun a 2-year fellowship in retina at Bascom Palmer in Miami.

Susan Quick, MD, has joined the private practice of St. Paul Eye in St. Paul, Minnesota.

Russell Warner, MD, has joined a private practice of ophthalmologists and an optometrist in Salem, Oregon. The ophthalmologists all did residencies here at Iowa: Drs. Dave Rowell (resident, 1984), Rick Neahring (Neuro-op fellow, 1995; resident, 1998), and Scott Stice (resident, 1998).

Fellowship Graduates

Rahul T. Pandit, MD, Cornea and External Disease Fellow, joined Medical Center Ophthalmology, in Houston, Texas, a small private practice group with ties to the Baylor Department of Ophthalmology. He is a cornea and refractive specialist in addition to practicing general ophthalmology.

Emily Greenlee, MD, Glaucoma Fellow, is staying at the University of Iowa as an Associate in Glaucoma and covering some hours in the General Clinic as well (see accompanying story).

Steven Lee Goldin, MD, Neuro-Ophthalmology Fellow, at last notice was still finalizing his plans, but plans to practice both in the private sector and in academic ophthalmology in Chicago.

Scott Larson, MD, Pediatric Ophthalmology Fellow, is an Assistant Professor of Ophthalmology in the Pediatric/Adult Strabismus Service of the University of Utah, John Moran Eye Center, Salt Lake City, Utah.

Dave Petersen, MD, Pediatric Ophthalmology Fellow, has gone into private practice in Salt Lake City, Utah. He joined a glaucoma specialist and a cornea specialist at Rocky Mountain Eye Care Associates. He replaced the incumbent pediatric ophthalmologist in the group and has bought a third-interest in the practice.

Denise Kayser, MD, Vitreoretinal Fellow, joined the North Bay Vitreoretinal Consultants, a retina-only private practice in Santa Rosa, California. She

joins three other physicians in the group all of whom have Iowa ties: two are 1987 Iowa Retina Fellowship Grads, Drs. Pat Caskey and Pat Coonan; the third grew up in Cedar Rapids (Dr. Steve Meffert whose father is a surgeon in Cedar Rapids).

Karin R. Sletten, MD, Vitreoretinal Fellow, moved to Madison, Wisconsin with her husband, former faculty member, **Ayad Farjo, MD**. Drs. Sletten and Farjo have both joined the Davis Duehr Dean Clinic in Madison, Wisconsin with former Iowa resident, Dr. Mitch Wolf (1990).

House Staff News (continued)

New Residents

Five new residents began training at the University of Iowa Department of Ophthalmology & Visual Sciences on July 1, 2003.



James M. Coombs, MD, has a Bachelor of Science degree in Biology from the University of Utah. He also earned his MD and did his transitional year at the University of Utah.



Reid Longmuir, MD, earned both his Bachelor of Science in Biology as well as his MD from the University of Iowa. Dr. Longmuir did his transitional year at Iowa Methodist Medical Center in Des Moines.



Jeffrey Maassen, MD, has a Bachelor of Arts in Chemistry and Biology from Wartburg College. He earned his MD from the University of Iowa. He spent a year as a full-time researcher (smooth muscle cell adhesion utilizing confocal microscopy) at the University of Iowa Department of Pathology. The next year he continued his research while working on a master's degree in Science Education.



Erin O'Malley, MD, earned a Bachelor of Arts degree in Biological Anthropology from Harvard University and her MD from Wayne State University. Dr. O'Malley did her transitional year at St. John Hospital in Detroit.



Erin Moore Shriver, MD, has a Bachelor of Arts in Biology from Pomona College, and an MD from Stanford University. She did her transitional year at Santa Clara Valley Medical Center in San Jose, California.

New Fellows

Cornea/External Disease

Paul Kun Row, MD, received a Bachelor of Science in Zoology from Andrews University, Berrien Springs, Michigan. He received his MD from Loma Linda University and did his Ophthalmology Residency at Loma Linda University Medical Center.



Paul Kun Row, MD

Glaucoma

Edward Sung, MD, received an Artium Baccalaureus in Chemistry from Princeton University and an MD from the University of Michigan. He spent his transitional year at St. Joseph-Mercy Hospital in Ann Arbor, Michigan. He did his Ophthalmology Residency at Illinois Eye & Ear Infirmary.



Edward Sung, MD

Neuro-Ophthalmology

Sonalee Kulkarni, MBBS (MD), did her medical training at Seth G. S. Medical College and KEM Hospital in Bombay, India where she also did her Ophthalmology Residency training. She spent a preliminary year in Internal Medicine at North Shore University Hospital at Forest Hills, NY and did her Neurology Residency at the University of Chicago.



Sonalee Kulkarni, MD

Pediatric Ophthalmology

Glen M. Bianchi, MD, has a Bachelor degree in Government from Harvard University. He received his MD from the State University of New York at Stony Brook. He did a preliminary year of Medicine at Saint Vincent's Hospital in New York, NY and did his Ophthalmology Residency at Mount Sinai Medical Center in New York.



Glen M. Bianchi, MD

Michael Hunt, MD, has a Bachelor of Arts degree from Baylor University where he was a University Scholar. He received his M.D. from Baylor College of Medicine. He did his transitional year at St. Joseph's Hospital, Houston, Texas, and his Ophthalmology Residency at the University of Iowa.



Michael Hunt, MD

Vitreoretinal

Jason Sanders, MD, has a Bachelor of Science in Architectural Design at Clemson University, Clemson, South Carolina. He earned an MD from the Medical University of South Carolina. Dr. Sanders spent his transitional year at the University of Tennessee College of Medicine, Chattanooga



Jason Sanders, MD

Unit and did his Ophthalmology Residency at the University of Tennessee, Chattanooga.

David S. Zumbro, MD, is a Lt. Col. in the Medical Corps, United



States Army. Dr. Zumbro has a Bachelor of Science Degree in Microbiology from Colorado State University, Fort Collins, Colorado. He earned his MD from the Uniformed Services University of the Health Sciences. He did his Ophthalmology Residency at Fitzsimmons Army Medical Center in Aurora, Colorado.

David S. Zumbro, MD

Retina/Research

Michael Grassi, MD, has a Bachelor of Science degree from the University of Southern Indiana. He earned his MD at Northwestern University. Dr. Grassi spent his transitional year at Massachusetts General Hospital in Boston and did his Ophthalmology Residency at the University of Iowa.



Michael Grassi, MD

ALUMNI

Dr. Bruce Spivey was honored as a recipient of the University of Iowa Carver College of Medicine Distinguished Alumnus Award for Service at a ceremony on the University of Iowa campus on June 6, 2003. The Award for Service is presented to medical alumni for meritorious service to their community, state, or nation. Dr. Spivey received his MD from the University of Iowa in 1959. He did his ophthalmology residency here from 1960 to 1963, completed a Master's Degree in 1964, and was on the faculty at UI from 1966 to 1971. Dr. Spivey is deputy executive vice president of the Council of Medical Specialty Societies and secretary general of the International Council of Ophthalmology, where he is in charge of developing a plan called "Vision for the Future" to improve ophthalmologic education and care in developing countries. He currently lives in San Francisco.

Malcolm L. Mazow, MD, (resident graduate, 1965) was selected as the Ashbel Smith Distinguished Alumnus for the year 2003, and was honored on Friday, May 23, 2003 by The University of Texas Medical Branch School of Medicine Alumni Association during a

President's V.I.P. Luncheon. A commencement followed the next day. The Ashbel Smith Distinguished Alumnus (ASDA) is selected by his/her peers on the basis of contributions to the medical profession, support for the high standards of excellence within the profession, and the prestige reflected upon his/her alma mater, The University of Texas Medical Branch. (added after print publication)

Puwat Charukamnoetkanok, MD, 2002 Ophthalmology Residency graduate, was recognized for exceptional teaching by the residents at the Massachusetts Eye and Ear Infirmary. He was recognized for his quality of teaching, accessibility to residents and dedication to education.

Arlene V. Drack, MD, (Pediatric Ophthalmology Fellow, 1991, Molecular ophthalmology/Retina research Fellow, 1992) has been appointed as Associate Professor of Ophthalmology specializing in pediatric ophthalmology, ophthalmic genetics and strabismus at the Rocky Mountain Lions Eye Institute, Department of Ophthalmology at the University of Colorado Health Sciences Center.

Announcements

Dr. Paul N. Arnold (resident, 1984) and Dr. Priscilla E. Perry were married on November 30, 2002. Both ophthalmologists now practice together in Springfield, Missouri.

Dr. Ann Neff (resident grad 1997) had a baby girl on Sunday March 23. Kataryna Nicole Neff was 7 lbs., 9 oz., and 21 inches long.

Lavannya and **Rahul Pandit** (Resident 2002, Cornea Fellow 2003) are happy to announce the birth of their son, Suraj. He was born June 22 in the early morning and weighed in at 7 lbs, 11 oz.

Former Neuro-Ophthalmology Fellow, **Dr. Fiona Costello**, and husband Kris Norman announce the birth of daughter, Gemma early on Father's Day 2003.

Former Retina Fellow, **Peter Sonkin, MD**, announced the birth of Scott Matthew Sonkin, born Thursday, January 30 at 2:11 p.m. He weighed 7 lbs. 9 oz. and was 19 ½ in.

Send us your news

Information about alumni and Iowa Eye Association Members will be published as space allows.

Send to:

Trish Duffel

Dept. of Ophthalmology & Visual Sciences
University of Iowa

200 Hawkins Dr.

Iowa City, IA 52242-1091

Fax: 319-356-0357;

e-mail: trish-duffel@uiowa.edu

Deaths

Addison W. (Wally) Brown, Jr., MD, died on August 19, 2003, of pancreatic cancer. A memorial scholarship fund has been established in his name at Graceland College in Lamoni. (The A.W. Brown Memorial Scholarship, Graceland University, 1 University Place, Lamoni, IA 50140.) Dr. Brown was a University of Iowa ophthalmology resident, graduating in 1972. At the time of his death, he was a partner at the North Iowa Eye Clinic in Mason City. A memorial service was held Saturday, September 27 in the atrium of Mercy Medical Center, in Mason City, IA.

Dan Jacobson, MD, 47, passed away on July 27, 2003, having fought a battle with cancer for almost 3 years. Dr. Jacobson was a neuro-ophthalmology fellow at the University of Iowa, graduating in 1987. Dr. Jacobson was a prolific writer having published over 50 articles in the medical literature. He was a staff physician and Director at Marshfield (Wisconsin) Clinic in the Departments of Neurosciences and Ophthalmology since 1987. He was on the Clinical Faculty at the University of Wisconsin Medical School since 1988. A memorial in Dr. Jacobson's name has been set up at the Marshfield Clinic Research Foundation, 1000 N. Oak Ave., Marshfield, WI 54449.

Fred Fuerste, MD, of Dubuque, Iowa, father of Drs. Gretchen, Hunter, and Rommel Fuerste, died on February 25, 2003, from an accident in his home. He was 81 years old and a long-time friend of the Department. Funeral services were held on February 28 at the Westminster Presbyterian Church in Dubuque.

Opportunities for Giving

Established in 1925, the University of Iowa Department of Ophthalmology and Visual Sciences is proud to be a leader in providing excellent eye care; conducting innovative and sight-saving research; and training future ophthalmologists and researchers who are dedicated to patient care, education, and research.

For decades, the UI has been recognized as one of the best ophthalmology education programs in the nation, and we continue to enjoy this distinction today.

Much of this reputation stems from a long history of combining a world-renowned faculty with some of the top residents and fellows in the field of ophthalmology and visual sciences.

The clinics and services within the Department of Ophthalmology and Visual Sciences represent a broad array of study about the eye and vision.

You may contribute to any of these specific areas of education, research, and treatment by indicating the specific fund(s) and amounts of gifts on the form on the next page. If you prefer, you may make gifts to these areas online by visiting GiveToIowa.org/eye.

Ophthalmic Gift Fund

Gifts to this unrestricted fund support the Department's areas of greatest need

Ophthalmology & Visual Science Research & Development Fund

This fund supports departmental research and development activities

C. S. O'Brien Library Resource and Learning Center Fund

This fund supports acquisition of educational materials and technology for the C. S. O'Brien Library

Cataract Research and Development Fund

Center For Macular Degeneration Research Fund

Cornea Research Fund

General Ophthalmology and Visual Sciences Research and Development

Supports the research and development activities of the Comprehensive Ophthalmology Service

Glaucoma Research Fund

Hayreh Research Fund

Supports research in the ocular vascular disease laboratory

Iowa Lions Eye Bank Fund

Low Vision Research Fund

Molecular Ophthalmology Laboratory Research Fund

Supports the research activities of the Carver Molecular Ophthalmology Laboratory

Neuro-Ophthalmology Research Fund

Oculoplastic Research Fund

Orthoptic Training Program Fund

Pediatric Ophthalmology Fund

Retinal Research Fund

Blodi Chair Endowment Fund

William Scott Chair for Education in Pediatric Ophthalmology

Enhances education in the pediatric ophthalmology program

Gifts to the UI Foundation, a channel preferred by The University of Iowa for private support, qualify as charitable contributions to an IRC Sec. 501(c)(3) organization for federal income, estate, and gift tax purposes.

Honor Clubs

The University of Iowa Roy J. and Lucille A. Carver College of Medicine has established honor clubs to recognize individuals and organizations who provide annual support.

Dean's Club

Contributors of \$1,000 or more are welcomed to the Dean's Club at the following levels:

- Washington F. Peck — \$10,000 and above
- Elizabeth Hess — \$5,000 through \$9,999
- Old South Hall — \$2,500 through \$4,999
- Dean's Club — \$1,000 through \$2,499

Other Annual Giving Recognition Levels

Those who make annual contributions of lower amounts are recognized as members of the following levels:

- Steward — \$500 through \$999
- Partner — \$250 through \$499

Visit Us at AAO 2003 in Anaheim

Our faculty will be instructors and presenters at numerous events at the AAO Annual meeting in Anaheim.

Friday, Nov. 14, 2003

1:40 PM — Controversies in LASIK — Moderator: Eric D Donnenfeld MD & **John E Sutphin MD**

2:03 PM — Optic Neuropathy — **Andrew G Lee MD**

Saturday, Nov. 15, 2003

9:30 AM — Recognizing and Managing Pupillary Disorders — Chair: Anthony C Arnold MD, Moderator: **Andrew G Lee MD**

10:20 AM — The Irregular Pupil — **Randy H Kardon MD PhD**

10:40 AM — The Constricted Pupil — **Andrew G Lee MD**

Sunday, Nov. 16, 2003

10:15 AM — Unexplained Visual Loss: What to Do with the Patient Who Can't See, but Has a "Normal" Exam Course 191 — Senior Instructor(s): Karl C Golnik MD; Instructor(s): Eric Eggenberger DO, Robert E Foster MD, **Andrew G Lee MD**

10:15 AM — Diagnosis and Management of Malignant and Benign Lid Lesions Made Easy Course 180 — Senior Instructor(s): **Jeffrey A Nerad MD**

11:30 AM — Lacrimal Disorders in Children Course 208 — Senior Instructor(s): Santosh G Honavar MD; Instructor(s): Don O Kikkawa MD, John V Linberg MD, David Baker Lyon MD, Asa Dan Morton III MD, **Jeffrey A Nerad MD**

2:00 PM — Pupil Pathology: A Clinical Approach Course 221 — Senior Instructor(s): Eric Eggenberger DO; Instructor(s): Karl C Golnik MD, **Andrew G Lee MD**

3:12 PM — Gene Directed Therapy for Ocular Diseases — **Edwin M Stone MD PhD**

Monday, Nov. 17, 2003

9:00 AM — Transient Visual Loss: Who Needs a Workup and Why?

Course 334 — Senior Instructor(s): Rosa A Tang MD; Instructor(s): **Andrew G Lee MD**

9:00 AM — Amblyopia — Chair(s): **Ronald V Keech MD**, George S Ellis Jr MD

10:05 AM — The Marshall M Parks Lecture: Outcomes with Full-Time Occlusion Therapy — **William E Scott MD**

11:33 AM — Teaching and Learning in Ophthalmology: The Feedback Sandwich — **Andrew G Lee MD**

1:00 PM — Glaucoma Filtration Surgery — Senior Instructor(s): John C Morrison MD; Instructor(s): Ellen Wommack Berg MD, **Young H Kwon MD PhD**, Frank J Mares MD, Steven L Mansberger MD, Julia Whiteside-Michel MD, Paul A Sidoti MD

2:00 PM — Diagnostic and Therapeutic Dilemmas in Neuro-Ophthalmology Course 420 — Senior Instructor(s): Nancy J Newman MD; Instructor(s): Neil R Miller MD, **Andrew G Lee MD**, Valerie Biousse MD, Lanning B Kline MD

3:15 PM — Small-Incision Oculoplastic Surgery Course 428 — Senior Instructor(s): Scott C Sigler MD; Instructor(s): **Jeffrey A Nerad MD**, Jonathan E Silbert MD, Robert G Small MD, Scot A Sullivan MD

Tuesday, Nov. 18, 2003

9:00 AM — Visual Fields in Neuro-Ophthalmology Course LEC499 — Senior Instructor(s): Jacqueline A Leavitt MD; Instructor(s): **Andrew G Lee MD**, Steven A Newman MD

9:00 AM — Physical Principles and Diagnostic Aspects of Modern Ultrasonography of the Eye Course 513 — Senior Instructor(s): D Jackson Coleman MD; Instructor(s): **H Culver Boldt MD**, Robert Folberg MD, Charles J Pavlin MD FRCS, Dan Z Reinstein MD, Ronald H Silverman PhD

9:18 AM — Investigative and Alternative Therapies for Macular Degeneration — **Karen Marie Gehrs MD**

10:15 AM — Blepharoplasty Course LEC540 — Senior Instructor(s): **Keith D Carter MD FACS**; Instructor(s):

Mark A Alford MD, Richard L Anderson MD FACS, Alan Bart Brackup MD, Robert C Kersten MD, Michael L Murphy MD FACS, Ann G Neff MD, **Jeffrey A Nerad MD**

10:45 AM — Functional Impact of Visual Loss in the Aged — Chair(s): **Andrew G Lee MD**, Gwen K Sterns MD

10:47 AM — What Can Myocillin Research Tell Us about Glaucoma? — **Wallace L M Alward MD**

11:00 AM — Visual Loss and Driving — **Mark Wilkinson OD**

Iowa Eye Reception

November 17, 2003

6:30 to 9:30 p.m. at Disney's Grand Californian Hotel, Wisteria Room

Please plan to join us during the American Academy of Ophthalmology Annual Meeting 2003.

Address Corrections

Please check your directory information on our website at <http://webeye.ophth.uiowa.edu/IowaEye/>. Corrections can be sent to us by mail, e-mail (Patricia-Zahs@uiowa.edu), or by clicking "address corrections" on the directory web page.

Update

Digital mania or illusion

“We’re goin’ digital...” it’s a natural evolution of the highly technological world we live in. Computers and digital information surround us.

For most of my life I have been an avid photographer. The inconvenience of having a darkroom, the cost and time required of maintaining one, greatly reduced the time I could spend doing photography, although it has always been an important part of my work.

In the past few years the quality and resolution of digital photography has become comparable to film-based images and it is becoming more affordable. So it is with ophthalmic photography.

As ophthalmologists we are becoming more and more familiar with digital images, their advantages in caring for patients and their problems. Cost is still a major factor in converting from film-based to digital images, whether you are looking at an office or academic department. Standardization and flexibility are major concerns and potential problems. No one wants to end up with “a Betamax.” Universal standards are being worked on by industry, the American Academy of Ophthalmology, and other interested parties. HIPAA compliance is another issue.

I believe that for us, as a large academic department, the time has come. For nearly two years we have had a committee working on various aspects of what we need and how we are going to make the

transition from film to digital images and eventually an electronic medical record. It will be costly. It will undoubtedly be frustrating. It will take time to learn new ways. It will be less efficient initially, but in the long run I am confident it will be a great asset.

At the present time we have over 150,000 files containing fundus photographs and fluorescein angiograms. In addition there are countless numbers of photographic files of patients from pediatric ophthalmology and strabismus, cornea and external disease, neuro-ophthalmology, and oculoplastics, not to mention videotapes of surgical procedures and eye movement disorders. There are no plans to scan these images and so there will be a period when both film and digital images will need to be used together. There are also a host of other digital files that will need to be incorporated in the “ophthalmic digital system” under construction; optical coherence tomography, topography of the cornea, echography, perimetry, and corneal endothelial imagery are among the few modalities we will need to readily access.

Archiving and retrieval of digital images will be far faster and easier than with film-based images, but they will require a huge computer capacity and a failsafe backup system. The expectation is that there will be password-protected access to images throughout the Department and the

capacity to transfer information from the electronic medical record with images to referring physicians, insurance companies, and others within HIPAA guidelines. Investigational Review Board approved clinical research will also be conducted more easily. Preparation of digital slides for research and education will be greatly enhanced. The promise is there. Implementation will require meticulous planning, the ability to satisfy differing needs and expectations, and the willingness to learn new skills at a time when practitioners have to see more patients. Savings in film, processing, storage, necessary personnel will not be sufficient to cover expenses. In fact it is likely that expenses will far exceed our present costs. The benefits ultimately should be worth the investment. Is digital ophthalmic photography an illusion or has its time arrived?

Tom Weingeist



CALENDAR 2003-2004

Clinical Conferences

DATE	TOPIC	GUEST SPEAKER
7 November 2003	Cataract	Stephen S. Lane, MD University of Minnesota
5 December 2003	Retina	Karl G. Csaky, MD Bethesda, Maryland
6 February 2004	Oculoplastics	(To be announced) Faculty Host: Jeffrey A. Nerad, MD
5 March 2004	Neuro-Ophthalmology	Anthony C. Arnold, MD UCLA, Jules Stein Eye Institute
16-17 April 2004	Iowa Medical Society Meeting , Des Moines, Iowa Special University of Iowa/Iowa Academy of Ophthalmology Combined Meeting features Glaucoma	George A. Cioffi, MD Devers Eye Institute, Portland, Oregon
18-19 June 2004	Iowa Eye Association Annual Meeting 2004 Wolfe Foundation Lecture	John M. Graether, MD Wolfe Clinic
	Inaugural Mansour F. Armaly Lecture	(To be announced)
	Alson E. Braley Lecture	James G. Diamond, MD Tulane University

Iowa Eye Reception

Nov. 17, 2003
6:30 - 9:30 p.m.
Disney's Grand Californian
Hotel, Wisteria Room

**Join us during
the American
Academy of
Ophthalmology
Annual Meeting**

Iowa Eye Association, inc.

Department of Ophthalmology and Visual Sciences
Pomerantz Family Pavilion
University of Iowa Health Care
200 Hawkins Dr.
Iowa City, Iowa 52242-1091

Nonprofit organization
U.S. Postage PAID
Permit No. 45
Iowa City, Iowa