NOTES FROM THE CHAIR

HMS Department of Ophthalmology, Boston Strong

As the Annual Meeting & Alumni weekend and Graduation approach, I find myself reflecting on what it means to be a member of the Harvard Medical School Department of Ophthalmology and what the department embodies as a whole.

As a department, we strive for excellence in all aspects of clinical care, educational initiatives, and research efforts. Through unification and collaboration, we have created a stimulating environment that has fostered creation and innovation. The Centers of Excellence, Boston Keratoprosthesis, anti-VEGF therapies, telemedicine programs, affiliate partnerships, international collaborations—all of these initiatives, and many others, embody our mission of reaching out on a global scale and our determination to eradicate blindness.

As we continue to share our knowledge with one another and the world, we become both lifelong learners and dedicated teachers. This knowledge exchange is what makes this department one of the best in the world, and is evidenced by the residents and fellows who graduate each year and go on to become future ophthalmic leaders around the world.

For that reason, it is always a pleasure to pause and express my appreciation to everyone who supports our vision and mission. Residents, fellows, faculty, staff, alumni, and friends—we are what make the Harvard Medical School Department of Ophthalmology.

Joan W. Miller, MD, FARVO
Chief and Chair

Inaugural HMS Ophthalmology Faculty Retreat Provides a Forum for Advancing Translational Efforts

More than 100 Harvard Medical School (HMS) Department of Ophthalmology faculty members joined together for a two-day retreat at Wentworth by the Sea in Newcastle, NH on April 5-6, 2013. The retreat united clinicians and scientists from across the department and presented a forum for candid discussion, dialogue and exchange that aimed to coalesce translational efforts and more rapidly advance bench to bedside discovery. The retreat also provided a relaxed and casual “meet-and-greet” venue for faculty.

“With faculty dispersed across several institutions, retreats are a golden opportunity for us to come together as a group, get to know one another, and have some productive conversation,” said Chief and Chair, Dr. Joan W. Miller.

In his opening remarks, Dr. Reza Dana, who chaired the Retreat Planning Committee, noted that the meeting offered an opportunity to “prioritize translational research efforts through both disease- and discipline-centered approaches.” Hence, faculty presentations largely focused on the HMS Department of Ophthalmology’s five Centers of Excellence (Age-related Macular Degeneration (AMD), Cornea, Diabetic Eye Disease, Glaucoma, and Mobility and Vision Rehabilitation) and two discipline-based Institutes (Ocular Genomics Institute and Ocular Regenerative Medicine Institute).
2012 China Trip Garners Enthusiasm for International Research & Training Program

In October 2012, a team of clinicians and scientists from the Harvard Medical School (HMS) Department of Ophthalmology embarked on a trip to China to bolster international collaborations. Keeping in line with the HMS tripartite mission, this alliance offered perspective sharing on current research efforts, clinical care and management practices; and opportunities to design new international training programs.

The 2012 trip built upon existing relationships that HMS Ophthalmology faculty and Chinese colleagues have been cultivating for several years. In 2010, faculty from HMS visited Shanghai Eye and ENT Hospital to explore potential research and educational opportunities and research efforts. In 2011, a five-member ophthalmology team from Shanghai was welcomed to Boston for two months. Team members received first-hand exposure to a full range of learning opportunities. During the most recent trip, HMS Ophthalmology faculty firm existing partnerships, extended their outreach to include more institutions, and advanced their international training efforts.

Reza Dana, MD, MSc, MPH, Louis Pasquale, MD, FARVO, Dong Feng Chen, MD, PhD, Pedram Hamrah, MD, Joseph Giolino, MD, continued on page 6
As one of the country’s largest and busiest centers for the treatment of inflammatory eye disease, the Ocular Immunology and Uveitis Service at Mass. Eye and Ear is recognized worldwide for its exceptional patient care and subspecialty expertise. Outfitted with state-of-the-art diagnostic and examination equipment, the service has experienced steady clinical growth over the last five years with patients arriving from around the world. Research conducted by clinician scientists on emerging treatment technologies and modalities also prompts many patient referrals from physicians who seek early access to the most advanced diagnostic expertise and ophthalmic care.

A Multidisciplinary Approach

Ocular inflammatory disorders are the third leading cause of blindness worldwide. If left untreated, uveitis can lead to glaucoma, macular edema, and cataract, and result in profound vision loss. Effective treatment depends on a multidisciplinary approach that integrates internal medicine with ophthalmic expertise. To this end, George N. Papaliodis, MD, Uveitis Service Director, since 2005, has built a strong and versatile clinical team whose unique cross-specialty training spans retina, cornea, immunology, and neuro-ophthalmology. Important alliances with clinics at HMS affiliate Massachusetts General Hospital — including Rheumatology, Gastroenterology, the Neuro-Oncology Service, Pulmonology, Infectious Disease, and the Crohn’s and Inflammatory Bowel Disease Service — complement the ophthalmic specialization of the Mass. Eye and Ear team.

Together, these collaborations have netted a 66 percent increase in clinical visits since FY07, with a corresponding 50 percent increase in surgical volume.

Spurred by the department’s emphasis on translating basic science and laboratory studies into treatment advances, the Ocular Immunology and Uveitis Service maintains a very productive research schedule. In 2008, the annual funding for clinical trials in uveitis was $800,000, and this budget grew to just over $1.8 million in 2012. The clinician scientists in the Service include:

George N. Papaliodis, MD: Board certified in both ophthalmology and internal medicine, Dr. Papaliodis specializes in the treatment of ocular inflammatory disorders (including uveitis) at the Mass. Eye and Ear Charles Street main campus and sees general ophthalmology and uveitis patients in the Stoneham center. His clinical interests span uveitis, systemic diseases with ophthalmologic manifestations, corneal disease, and cataracts. In research, he serves as principal investigator for a clinical study on the ActiPatch® device, which is a potential alternative non-invasive treatment option that uses pulsed electromagnetic field technology to restore the tight junctions between endothelial cells and minimize inflammation within the eye.

Lucia Sobrin, MD, MPH: Dr. Sobrin is a full-time clinician scientist with the Retina and Uveitis Services at Mass. Eye and Ear, with clinical interests that include retina, uveitis, and diabetic retinopathy. A Mass. Eye and Ear Department of Ophthalmology Scholar and the Tonseth-Joslin Fellow, Dr. Sobrin conducts research on the genetics of complex retinal and uveitis diseases, as well as immune-modulating drugs, which are a potential alternative to corticosteroids.

Ann-Marie Lobo, MD: Dr. Lobo is a member of the Mass. Eye and Ear Ocular Immunology and Uveitis Service and also provides comprehensive ophthalmology care. She sees patients for uveitis care at the Charles Street location and for uveitis and comprehensive care at Mass. Eye and Ear, Longwood located at 800 Huntington Ave. Her clinical interests include diagnosis and treatment of ocular inflammatory disease and cataract surgery. Her research interests include uveitis outcomes with TNF alpha inhibitor therapies. She is principal investigator in several multicenter clinical trials in uveitis.

Practice Philosophy

The Ocular Immunology and Uveitis Service is dedicated to eradicating uveitis and ocular inflammation.

With a zero tolerance policy for continued uveitis or “low grade” inflammation recurrences in the eye, physicians strive to “get to the bottom” of each patient’s eye inflammation.

By identifying the underlying cause, physicians can provide effective treatment.
Mass. Eye and Ear Joins Global Alliance to Enable Responsible Sharing of Genomic and Clinical Data

Massachusetts Eye and Ear is among the nearly 70 leading health care, research, and disease advocacy organizations that have joined together to form an international alliance dedicated to enabling secure sharing of genomic and clinical data. “We are excited to be part of the Global Alliance effort,” said Eric Pierce, MD, Director of the Ocular Genomics Institute at Mass. Eye and Ear/HMS.

The cost of genome sequencing has fallen one-million fold, and more and more people are choosing to make their genetic and clinical data available for research, clinical, and personal use. “Insights from genetic studies and gene-based therapies offer patients great hope for the future, but data and clinical material are often restricted to institutions and individual research programs,” said Chief and Chair, Joan W. Miller, MD, FARVO. “The alliance will support the formation of large, shared datasets that will allow researchers around the globe to identify target pathways and develop transformational therapies for patients. The group will develop methods and policies to share information responsibly, while protecting patient privacy and the public interest.”

Melki Team Awarded Grand Prize

Founder of the Boston Eye Group and part-time clinician in the Cornea Service at Mass. Eye and Ear, Samir Melki, MD, PhD, and his team were awarded the Grand Prize at the American Society of Cornea and Refractive Surgery 2013 Film Festival. Their video presentation, “Telemetric IOP Measurement: Deciphering Glaucoma’s Blind Spot,” was selected among 180 world-wide entries. The video demonstrated the usefulness of an implantable pressure transducer. This device, which is implanted like an intraocular device behind the iris, allows patients and clinicians to read the intraocular pressure with a remote control-like device. “This may be a game-changer,” said Dr. Melki. “It should allow us to better understand the disease through a tremendous ability to collect pressure data.” The transducer is very well-tolerated and is expected to be an important asset for the future management of glaucoma.

Notes From The Chair continued from page 1...

Ophthalmology stand apart from the rest.

Even during difficult times, when life shakes us, we have shown our resiliency and dedication. In particular, the tragic bombing that took place at the Boston marathon finish line on April 15th was heartbreaking. But, our faculty, fellows, residents and staff were on location throughout our HMS affiliate hospitals to tend to the wounded.

Given the scope of the tragedy, we were very fortunate that there were a limited number of serious eye injuries. Ophthalmology colleagues at our clinical affiliates worked together to provide the best possible care to victims, treating 16 of the 20 individuals who suffered eye trauma from the blasts.

Several residents came in on their days off to ensure that we had full consultation coverage at our affiliates and in the Mass. Eye and Ear Emergency Department. In particular, for his exceptional service, resident, Dr. Yoshihiro Yonekawa was nominated by his peers to be an honored invitee at the United Way Healthcare Breakfast on May 29 at the Boston Park Plaza Hotel.

It is often said that in times of crisis, our true character is revealed. Thus, I am filled with gratitude to see our department—time and time again—rise to the challenges that confront us. I look forward to reconnecting with quinquennial alumni (1963 to present) during this year’s Alumni weekend. And, I am delighted to recognize 50 exceptional residents and fellows as they graduate on June 27th. Class of 2013: we wish you well, and, as with all of our alumni, we know you will represent us well and hope you stay connected.

Joan W. Miller, MD, FARVO
Chief and Chair
Uveitis Service continued from page 3...

Several additional members in the Department of Ophthalmology also are involved in the treatment of patients with ocular inflammatory conditions and participate in training Uveitis fellows, including:

**Reza Dana, MD, MSc, MPH**: Director of the Cornea and Refractive Surgery Service at Mass. Eye and Ear and the Claes Dohlman Professor of Ophthalmology, Dr. Dana focuses on treatment strategy efficacy for ocular surface inflammatory disorders, regulation of innate immunity, and the development of novel rodent models that mimic clinical conditions, such as dry eye.

**Lucy Young, MD, PhD**: As a member of the Retina Service, Associate Professor Dr. Young has a particular interest in infectious retinitis, including HIV-related retinal complications, toxoplasmosis, and retinal complications associated with Keratoprosthesis implantation.

**Dean Elliott, MD**: Dr. Elliott is the Stelios Evangelos Gragoudas Associate Professor of Ophthalmology and a vitreoretinal surgical innovator. He has an interest in posterior uveitis and has contributed patient data to studies, such as the Multicenter Uveitis Steroid Treatment (MUST) Trial, which examines associations among visual acuity and vision- and health-related quality of life.

Uveitis team members share their specialized knowledge with medical students, residents and fellows in the classroom, clinic and operating room. To encourage the development of cross-trained specialists and attract the best and brightest talent to the department, Dr. Papaliodis re-established the Ocular Immunology and Uveitis Fellowship (AUPO certified) at Mass. Eye and Ear, which he now co-directs with Dr. Sobrin. This highly competitive and intensive one-year program attracts outstanding U.S. candidates and provides advanced diagnostic, therapeutic, surgical, and research training for ocular inflammatory disorders. The variety of attending physicians provide the necessary skills for delivering high quality and comprehensive patient care. Through collaborations with the Rheumatology Department of Mass General Hospital, Ocular Immunology and Uveitis fellows gain clinical experience in the effects of inflammatory disorders beyond the eye. Ample research opportunities are also available at Mass. Eye and Ear/Schepens, where ongoing research projects are delineating immunological and inflammatory responses within the eye.

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**HMS Ophthalmology Hosts Alcon Research Institute Reception**

On March 7, 2013, the HMS Department of Ophthalmology hosted an evening reception at Mass. Eye and Ear for members of the Alcon Research Institute (ARI) who were in Boston attending ARI’s biennial Research Symposium. The meeting, normally held at Alcon’s Ft. Worth, Texas headquarters, took place this year at Novartis Institutes for BioMedical Research in Cambridge. The change in venue presented a unique opportunity to invite this prestigious group of 120 vision science leaders to gather together with HMS department faculty in a collaborative and casual exchange.

HMS Ophthalmology Chief and Chair, Dr. Joan W. Miller and some 60 department faculty enjoyed stimulating conversation with their ARI guests. The guest roster included former HMS alumni, David Epstein, MD, MMM, Chairman of the Department of Ophthalmology at Duke University School of Medicine, and Joel Schuman, MD, FACS, Chairman of the Department of Ophthalmology at the University of Pittsburgh, who was one of five recipients of the 2012 António Champalimaud Vision Award. The event also was an opportunity to showcase Mass. Eye and Ear facilities; ARI members were given guided tours of the Genomic Laboratory, Ophthalmic Education’s wet laboratory, operating rooms and ophthalmic plastics suite.

According to Dr. Miller, who serves on both the ARI Scientific Advisory Board and Executive Committee, the reception was “a rare opportunity to engage with an extraordinary group of research leaders in ophthalmology and vision science.” The department and ARI share a longstanding commitment to excellence in research and, over the years, ARI has provided generous support to some of the department’s most accomplished faculty, including: Lloyd Paul Aiello, Patricia D’Amore, Reza Dana, Claes Dohlman, Ted Dryja, Elizabeth Engle, Ilene Gipson, Richard Masland, Joan W. Miller, Elizer Peli, and Lois Smith. At this year’s ARI symposium, Dr. Masland was one of 15 distinguished investigators invited to present their work, while Ula Jurkunas was honored as a 2013 ARI Young Investigator grant recipient. The 2014 Alcon Research Institute Awardees, which were announced at ARVO’s 2013 annual meeting, were François Delori and Janey Wiggs (see page 9).

Since its inception in 1981, the Alcon Research Institute has granted almost $21 million to more than 230 researchers in support of their research into eye disease and ophthalmology.


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**For more information, please visit:**

Neena Haider, PhD, Pablo Argüeso, PhD, Jing Hua, MD, and Leo Kim, MD, PhD, represented the department and visited multiple locations throughout Beijing, Shanghai, Xiamen and Harbin including Shanghai Eye, Ear, Nose and Throat (EENT) Hospital as well as Beijing University First Hospital, People’s Hospital–2nd Hospital, Tongren Hospital, Beijing University Medical Center, and Xiamen Medical School.

The group received a tour of each institution and listened to presentations on clinical and research developments. From this information exchange, Associate Scientist at Schepens, Dr. Dong Feng Chen, commented, “I was most impressed with their rapid improvement of patient care in recent years and their highly efficient managerial style that allowed the management of a large patient volume and clinical practice.”

Travelers met with the President and management team of each hospital and university to strategically and cooperatively develop training programs for students and fellows, as well as joint conferences that would promote global idea exchange. “In an era where, in the US, we see less support for research, the Chinese government is investing a significant amount of financial research support in the universities,” noted Dr. Haider, Associate Scientist at Schepens. “Thus the mission of our trip—to promote the international scholar’s training and research program—was received with great enthusiasm.”

In addition to the TV program, the organization has recently launched a new web site (www.w-e-h.org), a Facebook page, a Twitter feed, and a YouTube channel.

Women’s Eye Health.org

Dong Feng Chen, MD, PhD, Chair of the Women’s Eye Health.org, is collaborating with associates from Peking University First Hospital to produce an educational TV series about eye disease for Beijing TV. The series complements the organization’s worldwide outreach efforts to build awareness of the prevalence of eye disease in women.

Marked as a success in terms of cross-pollination of ideas and fortifying relationships, the trip was heralded by faculty members as a cultural delight. “It was a great cultural experience beyond my expectations,” remarked Dr. Haider. Between speaking engagements and idea exchanges, highlights of the trip for travelers included touring the Great Wall, reveling in a hotpot lunch in chilly downtown Harbin, and enjoying the views of old and new Shanghai from the 104th floor of the observation tower in downtown Shanghai. Dr. Pasquale mentioned, “I learned the true meaning of hospitality on this trip.”
This year's HMS Ophthalmology faculty retreat was the impetus for the creation of the HMS Department of Ophthalmology Ocular Oncology Center of Excellence, which will focus on improving the diagnosis and management of a variety of ocular surface, intraocular and orbital tumors. This center will be chaired by Kathryn Colby, MD, PhD, an ocular surface tumor expert at Mass. Eye and Ear and Boston Children’s Hospital. Bruce Ksander, PhD, of Schepens Eye Research Institute, will serve as co-chair. Founding members include Evangelos Gragoudas, MD, Ivana Kim, MD, Suzanne Freitag, MD, and Rebecca Stacy, MD, PhD. “This idea arose while several of us were socializing after dinner at the faculty retreat,” reports Dr. Colby. “It seemed like a natural extension of our already existing informal collaborations in this area and the environment of the faculty retreat allowed us to get support from the founding members in short order.” Further details about the center’s activities will be forthcoming shortly and interested faculty members are encouraged to contact Kathryn_Colby@meei.harvard.edu.

One overriding theme emerged during the retreat; while each Center/Institute is in a different phase of development, they all are markedly more robust than just one year ago. New initiatives included symposia, focus groups, cross-departmental collaborations, seminar series, and training opportunities. A strengthened, multidisciplinary, integrated approach to translational research also helps departmental efforts to seek new funding opportunities, establish industry sponsorship and expand international collaborations, and these were also topics of discussion at the retreat.

New faculty development efforts also provided fodder for discussion. Director of Research at Schepens, Dr. Patricia D’Amore, described both the newly formed Nomination Committee, and the Mentoring Program currently under development with Dr. David Hunter. Guest speaker, Dr. Dennis Brown, presented on the symbiotic relationship between mentor and mentee. Related to this was a dedicated “early career investigators” break-out session, which gave young faculty members a chance to consider how they might find growth opportunities in the context of the Department and provide new perspectives and leadership in its efforts.

Several presenters discussed the clinical and research resources available to department members, including the Ophthalmology Clinical Research Office, Biobank, Ocular Surface Imaging Center, and institutional collaborations at Joslin and the Broad Institute. The Genomics CORE, which offers “fee-for-service” genomics analyses, and the CLIA-certified Genetic Diagnostic Testing Service went live on June 1 and are now accepting samples.

Dr. Miller was especially pleased with the outcome of the retreat. “We have tremendous capacity and depth of knowledge across the department,” she noted. “This type of collaboration—the first of many—gives us an opportunity to identify challenges and opportunities, and to think ‘audaciously’ about what we can accomplish together.”

Ula V. Jurkunas, MD, Sheila Borboli-Gerogiannis, MD, FACS, and Jing Chen, PhD
ARVO: At a Glance

HMS Ophthalmology participation at ARVO’s 2013 meeting held in Seattle on May 5-9, 2013 was especially strong this year. HMS faculty, trainees and research fellows presented a total of 239 abstracts (44 papers and 195 research posters) representing the investigative work of nearly 230 individuals from the department, including 90+ faculty, 20 clinical fellows, 19 residents, and over 100 research fellows. Travel Grants were awarded to nine department members, and a significant number of HMS faculty, alumni and trainees received ARVO awards and honors.

Of note, Joan W. Miller, MD, FARVO, has been appointed for a three-year term to the ARVO Foundation for Eye Research Board of Governors, which began in May, 2013.

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<td>Joan W. Miller, MD, FARVO</td>
<td>ARVO Foundation for Eye Research Honoree</td>
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<td>Reza Dana, MD, MPH, MSc</td>
<td>ARVO Gold Fellow</td>
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<td>Anne Fulton, MD</td>
<td>ARVO Gold Fellow</td>
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<td>M. Elizabeth Hartnett, MD*</td>
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<td>Sayon Roy, PhD*</td>
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<td>Janey Wiggs, MD, PhD</td>
<td>2014 Alcon Research Institute Award for Clinical/Surgical Sciences</td>
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<td>François Delori, PhD</td>
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<td>Yang Liu, MD</td>
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<td>Melissa Meyer zu Horste, MD</td>
<td>ARVO Foundation/ M. Velma Dobson Memorial Travel Grant</td>
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<td>Emily Wiecek, BS</td>
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<td>Shruti Aggarwal, MD</td>
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<td>Cecily Hamill, MD, PhD</td>
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<td>Yihe Chen, MD</td>
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<td>Wendy Kam, MSc</td>
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<td>Yuichi Uchino, MD</td>
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*Alumni
Ula Jurkunas, MD, was awarded an Alcon Research Institute Young Investigator Grant for 2013. The award is intended to encourage and promote the early career development of clinicians and scientists entering research in vision science and ophthalmology. Dr. Jurkunas is a clinician-scientist who performs corneal and refractive surgery at Mass. Eye and Ear and Massachusetts General Hospital and basic science research at Schepens. Her award will be used to fund her studies on the pathogenesis of Fuchs, and limbal stem cells.

The Scientific Selection Committee met on Saturday, May 4 at the ARVO annual meeting to decide the 2014 Alcon Research Institute Awardees. This year’s awards—announced at the Podos Colloquium that same day—included Janey Wiggs, MD, PhD (clinical/surgical sciences), and François Delori, PhD (basic sciences).

Dr. Wiggs’ important contributions are in understanding the genetic risk factors, environmental risk factors, and gene-environment interactions associated with glaucoma. She has employed a number of approaches, including genome-wide association studies, to identify genes that underlie glaucoma risk. Dr. Delori is well known for his pioneering efforts in the field of fundus autofluorescence (AF), including his development of a spectrofluorometer to study the intrinsic fluorescence of the retina and a standardized approach for quantifying fundus AF. He also developed a novel in vivo method to measure macular pigment density using fluorescence techniques.
The HMS Charles L. Schepens Professorship: A Lasting Tribute to a Beloved Mentor

Alice R. McPherson, MD, has paid formal tribute to her mentor, colleague and friend, Charles L. Schepens, MD, on two special occasions. The first was when she commissioned a sculpture in his likeness, which she presented to him on November 30, 1990 as part of the 40th anniversary of the founding of Schepens Eye Research Institute. The second initiative was to provide a large leadership gift needed to establish a Professorship in her mentor’s name. Funding for the Harvard Medical School Charles L. Schepens Professorship, which will be completed in December, 2013, honors the extraordinary legacy of Dr. Schepens, whose leadership and contributions to the field of ophthalmology have benefitted innumerable lives.

During Schepens’ 40th anniversary celebration, Dr. McPherson, who was the first woman to complete a retinal fellowship in the U.S. and did so under the tutelage of Dr. Schepens, spoke eloquently of her mentor. “All of us have admiration and respect for Dr. Schepens as a surgeon, educator and founder of the Institute. He has done more than any man living today to advance the science of ophthalmology. On behalf of all of us who benefited from his leadership and his teaching, we dedicate this sculpture as a very small gesture of our appreciation. Our hope is that now and in the years to come, people…will be reminded of a great man who has made such a tremendous difference in the lives of many others.”

Dr. McPherson is a strong proponent of translational research as a driving force for advancing ophthalmic medicine and science. This passion was shared by her mentor and served as a springboard for the establishment of the Schepens Professorship. Dr. McPherson hopes the Professorship will be a building block for innovative research that is powered by the increasing convergence of bench-to-bedside efforts. “The more clinicians and bench investigators can develop good synergies and work towards common goals, the faster we’ll find answers to the challenges in ophthalmology: What are the needs? Where are the most promising opportunities? How can we do better?”

Dr. McPherson is also a strong proponent of the new incumbent of the Schepens Professorship, Patricia D’Amore, PhD, MBA, FARVO, who is Director of Research at Schepens. “Pat D’Amore is deeply familiar with the translational challenges that need to be addressed in vision research and is an excellent choice to carry out the goals of the Professorship. I can’t think of anyone more qualified to fill this role, especially now that Schepens and Mass. Eye and Ear are working in unison to push advances to the point where—in a generation or two—no one will suffer needlessly from a blinding disease.”

Assuredly, Dr. Schepens, who passed away in 2006, would be very proud of his former mentee, who today is Professor of Ophthalmology at Baylor College of Medicine, where she established the McPherson Retina Center. A highly accomplished educator, scholar, leader and pioneer dedicated to the study and treatment of retinal disease, Dr. McPherson has made innumerable contributions to the study and treatment of retinal disease. She pioneered scleral buckling procedures, cryotherapy, and xenon and laser therapy to treat retinal detachment and diseases of the retina. In the 1960s, she was one of the first to document treatment of diabetic retinopathy with photocoagulation of the retina. The following decade, this pioneering work helped pave the way for a large double-masked National Institutes of Health (NIH) Diabetic Retinal Study, which helped establish the value of laser therapy in treating diabetic retinopathy.

“We who were fortunate to have had Dr. Schepens as a teacher and mentor witnessed an exceptional professional and personal standard, which we strive to emulate. Dr. McPherson perfectly embodies these qualities. Through broad funding of research and the education of young clinicians and investigators, her generous support has augmented medical knowledge enormously and represents now and into the future a lasting legacy to her foresight.”

– Lionel Chisholm, MD, FRCS (C)
President, Schepens International Society

An extraordinary and dedicated leader, Dr. McPherson’s funding of the Schepens Professorship is just one of many ways she has given back to her field. In 1969, she founded the Retina Research Foundation (RRF), a leading eye research organization dedicated to promoting basic research to eradicate retinal disease. Since 1973, the RRF has given over $25 million to support retina research and—with an endowment of over $40 million—provides ongoing support for a host of research grants and initiatives, international fellowships, professorships, and retina Chairs, and supports 12 established retina research awards.

The recipient of numerous honors, Dr. McPherson has applied her knowledge and leadership acumen to many professional organizations, including as president of The Retina Society and second vice-president of the American Academy of Ophthalmology. In the 1960s, she was the first American woman to be accepted into the prestigious 100-member European Club Jules Gonin. Earlier this year, she reached a pinnacle in her career when she was selected to receive the 2014 Jules Gonin Medal, one of the most prestigious medals in ophthalmology. The medal is awarded every four years by the International Council of Ophthalmology and presented at the World Ophthalmology Conference for the highest achievement in ophthalmology.

At its 2012 Annual/Alumni Reunion Meeting last spring, the HMS Department of Ophthalmology presented Dr. McPherson with its Distinguished Alumni Award in recognition of her enduring career achievements and philanthropic endeavors within the vision community. In presenting Dr. McPherson the award,
HMS Department of Ophthalmology Chief and Chair, Dr. Joan W. Miller, remarked, “By any measure, Alice, you’ve pursued a remarkable career. But it is your deep propensity for giving back to your field, to your profession and to your community that we especially want to recognize today as one of your most enduring legacies. Your wide-reaching philanthropy – through the Retina Research Institute and foundation work – has made, and continues to make, the world a better place.”

Today, this very vibrant and energetic retinal pioneer continues to advance and shape her profession – treating patients, mentoring trainees and supporting research that changes lives.

“Like my father, Alice has been a devoted teacher and mentor to so many,” noted Dr. Schepens daughter, Claire Schepens-Delori. “She is a remarkable woman and I know my father was very proud to have her on his team.”

And like her mentor, Dr. McPherson has established a living legacy that will be a driving force for progress for generations to come. It’s this knowledge that gives momentum to her foundation work and continues to be a core focus of her career. “When you die, you take your knowledge with you,” she noted during a 2009 interview with The Foundation of the American Academy of Ophthalmology Museum of Vision & Ophthalmic Heritage. “It’s the people you leave behind, the people that you have trained, who will hopefully train others and that will, in turn, decrease the incidence of blindness.”

The Charles L. Schepens Award and Gold Medal (commissioned by Dr. McPherson), were created by the Retina Research Foundation, Paul Kayser Fund and the Schepens International Society to honor the legacy of Dr. Schepens. The award recognizes a vision scientist who has contributed new knowledge to the field of vitreoretinal diseases and/or has made special contributions to prevent and decrease blindness. The medal and award ($50K) are presented each year at the meeting of the American Academy of Ophthalmology. The recipient presents the Charles L. Schepens Lecture, which is later published in Archives of Ophthalmology.

Evangelos S. Gragoudas, MD, the Charles Edward Whitten Professor of Ophthalmology at Harvard Medical School and Director of the Retina Service at Mass. Eye and Ear, was inducted to the Mass General Cancer Center's The One Hundred on June 5, 2013. For the past six years, The One Hundred's annual fundraiser gala has honored 100 individuals and groups whose diligence and discoveries, philanthropy and passion have helped advance the fight against cancer. Funds raised support research, patient care, education and community outreach programs.

Dr. Gragoudas was recognized by The One Hundred as a world authority on the diagnosis and management of intraocular tumors and for his scientific discoveries including the development of therapies for ocular malignancies and retinal neovascular diseases that have saved the eyesight and lives of countless patients. Dr. Gragoudas pioneered the use of proton beam irradiation therapy in the treatment of ocular melanoma, a safe and effective modality that has benefited more than 15,000 patients worldwide.
Long-term Vitamin and Mineral Supplementation May Slow Age-related Macular Degeneration, But Not Cataract; Results of the Age-Related Eye Disease Study (AREDS2) Study

The National Eye Institute (NEI) recently published the results of AREDS2, a five-year study designed to test whether the original AREDS formulation could be improved (JAMA, 2013). More than 4,000 people, ages 50 to 85 years, who were at risk for advanced AMD, participated in AREDS2 at 82 clinical sites across the country.

Ivana Kim, MD, was Principal Investigator for Mass. Eye and Ear, which was one of the study centers for this clinical trial. The first Age-Related Eye Disease Study (AREDS), led by the NEI, which concluded in 2001, established that daily high doses of vitamins C and E, beta-carotene, and the minerals, zinc and copper—called the AREDS formulation—can help slow the progression to advanced age-related macular degeneration (AMD) in some individuals (Archives of Ophthalmology, 2001).

In the last decade, researchers found that some of the original AREDS components might have untoward side effects when taken in high doses; namely, beta-carotene may increase the risk of lung cancer in smokers, and zinc may cause stomach upset.

“Millions of older Americans take nutritional supplements to protect their sight without clear guidance regarding benefit and risk,” said National Eye Institute’s director Paul A. Sieving, MD, PhD.

To assess the benefits, researchers investigated four re-formulations. The addition of omega-3 fatty acids (1), the addition of antioxidants, lutein and zeaxanthin (2), and the reduction of zinc (3) did not add benefit to the original formula in protecting against AMD. However, the removal of beta-carotene combined with the addition of lutein and zeaxanthin (4) had a small benefit in some patients (18 percent risk reduction) compared to those taking formulas with beta-carotene and no lutein and zeaxanthin.

As reported in 2001, the original AREDS formulation does not protect against cataract, and the AREDS2 re-formulations did not show different results (JAMA Ophthalmology, 2013). For more information about AREDS2, visit www.MassEyeAndEar.org or www.nei.nih.gov/areds2.

Massachusetts Eye and Ear Cornea Specialist, Dr. Roberto Pineda Performs First Corneal Transplant with Pre-loaded Tissue

Roberto Pineda II, MD, performed the first successful cornea transplant with donor endothelial tissue preloaded into EndoGlide™ (Angiotech Pharmaceuticals, Inc.) cartridges in April, 2013. Tissue was preloaded at the Lions Eye Institute for Transplant & Research (LEITR)—a nonprofit organization dedicated to the recovery, evaluation and distribution of eye tissue for transplantation, research and education based in Tampa, FL. A world-leading cornea expert and refractive surgeon at Mass. Eye and Ear, Dr. Pineda collaborated with LEITR and Angiotech/Sharpoint to help develop this innovative procedure.

In a pre-clinical study presented at the 2012 Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting, corneal buttons pre-loaded by LEITR sustained an average of 9.07% endothelial cell damage, compared to 36.2% endothelial cell damage in control group tissue that was loaded into the insertion system on site (p=0.004). According to Dr. Pineda, “Reducing any variables that could interfere with a patient's ability to successfully regain sight after surgery is significant,” said Dr. Pineda, “The ultimate goal is to improve the quality of life for our patients.”

Gene Therapy: Coming of Age

A recent study confirmed that gene therapy improves patients’ vision, but does not slow or stop the underlying disease process (Cideciyan et al., PNAS, 2013). In the associated commentary, “Retinal Gene Therapy Coming of Age,” HMS Ophthalmology researchers, Connie Cepko, PhD and Luk Vandenberghe, PhD explored ways in which the therapeutic approach could be refined, combined with other forms of treatment, initiated earlier in the course of the disease, or otherwise improved to achieve a more complete therapeutic outcome (Human Gene Therapy, 2013). According to James M. Wilson, MD, PhD, Director of the Gene Therapy Program at the University of Pennsylvania Perelman School of Medicine, “The paper published in PNAS and the associated commentary published in Human Gene Therapy provided important context for the long-term follow-up of the pioneering gene therapy performed in patients with LCA2.” While it is clear that gene therapy continues to work after several years, the degradation of photoreceptors and longer term efficacy are still unclear. However, these results suggest a role for additional therapy, such as neuroprotection.

Topical Use of Arthritis Drug May Safely Provide Relief for Dry Eye Disease

An estimated nine million people in the United State suffer from dry eye disease. In a randomized, double-masked clinical trial designed to assess the safety and efficacy of topical anakinra (Kinera; Amgen Inc.)—a recombinant version of human IL-1Ra approved for treatment of rheumatoid arthritis—for dry eye disease, researchers from Mass. Eye and Ear and Brigham and Women’s Hospital demonstrated that eye drops containing anakinra were well tolerated by patients and were significantly more effective than standard eye lubricants in improving the signs and symptoms of dry eye disease (JAMA Ophthalmology, 2013). “This clinical trial was a significant milestone in our research,” said senior author, Reza Dana, MD, MPH, MSc. “We may have found a safe, well tolerated eye drop that can treat the underlying cause of dry eye rather than just temporarily mask the symptoms.”
Neural Resource Allocation in Visual Adaptation

Scientists at the Salk Institute for Biological Studies and Schepens Eye Research Institute/Mass. Eye and Ear found that visual adaptation can be explained by a process that optimizes sensitivity for many stimuli, rather than changing sensitivity only for those stimuli whose statistics have changed (PNAS, March 12, 2013). Sergei Gepshtein, PhD, Luis A. Lesmes, PhD (a Research Associate in the Bex Laboratory at Schepens), and Thomas D. Albright, PhD, demonstrated a large-scale reorganization of visual sensitivity. “When stimulation changes,” Dr. Gepshtein explained, “the visual system reorganizes its sensitivity by reallocating neural resources. Because the resources are limited, increasing sensitivity to some stimulus must be accompanied by decreasing sensitivity to some other stimulus. It is therefore expected that sensory adaptation creates a pattern of gains and losses in sensitivity.” According to Gepshtein, the application of this research is far-reaching, and may be beneficial in technologies where motion sensing and compression of dynamic visual signals are involved.

Corneal Lubrication Research at Mass. Eye and Ear and University of Calgary Holds Promise for Treatments for a Range of Women’s Health Issues

Natural lubricants play an important role in health. Recently, David Sullivan, PhD, of Mass. Eye and Ear/Schepens Eye Research Institute and Dr. Tamzin Schmidt at the University of Calgary in Canada demonstrated that ocular surface cells produce lubricin, which prevents friction between the cornea and conjunctiva, reducing shear stress (such as during eye blinking) to prevent eye injury at the ocular surface (JAMA Ophthalmology, April 18, 2013). “These novel findings hold promise not only for treatment of conditions such as dry eye disease, or complications from contact lens wear and refractive surgery,” said lead author Dr. Sullivan, who is also the Founder of the Tear Film & Ocular Surface Society, “But also, they are encouraging for the possible treatment of postmenopausal vaginal atrophy and other disorders that occur more commonly in women, such as xerostomia and interstitial cystitis.”

Development of New Model for Diseases of Human Corneal Endothelium

Cell loss due to aging or corneal endothelial disorders, such as Fuchs Dystrophy, can lead to corneal edema and blindness, resulting in the need for cornea transplants. To gain a better understanding of corneal endothelial disorders, a research team led by Ula Jurkunas, MD, of Schepens Eye Research Institute/Mass. Eye and Ear, developed novel model systems for human corneal endothelium (PLOS ONE, December 2012). “These models mimic very well the critical characteristics and functionalities known from the tissue in the eye,” Dr. Jurkunas said. “They will enable cell biologists to more reliably study human corneal endothelium in health and disease. The ability to enhance HCEnC cell self-renewal and growth opens a new window of development of novel regenerative therapies for corneal swelling, hopefully reducing the need for corneal transplantation in the future.”

Ranibizumab May Prevent Common, Serious Complication of Retinal Detachment

Proliferative vitreoretinopathy (PVR), or the formation of scar tissue in the eye, is a serious, sight-threatening complication in people recovering from surgical repair of retinal detachment. Scientists from Schepens Eye Research Institute/Mass. Eye and Ear demonstrated that ranibizumab, an anti-VEGF-A monoclonal antibody fragment, is a potential prophylaxis for PVR (American Journal of Pathology, May 2013). While investigating the functional relationships between growth factors known to promote pervasive human diseases, researchers discovered that ranibizumab reduced the bioactivity of vitreous from patients and experimental animals with PVR, and protected rabbits from developing this disease. Senior author, Andrius Kazlauskas, PhD, commented, “Our discoveries also raise the provocative idea that anti-VEGF-based therapies may be effective for managing more than the angiogenesis- and vascular-permeability-driven pathological conditions.”

Predicting the Next Eye Pathogen Using Systems Biology

Since the first adenovirus was characterized in 1953, 69 human adenoviruses have been recognized as unique types. Analysis of whole-genome sequence data for existing and new adenoviruses confirmed a critical role for homologous recombination in adenovirus evolution, leading to new and sometimes serious human infections. Using a systems biology approach, researchers from Mass. Eye and Ear/Harvard Medical School (including Christopher Robinson, Xiaohong Zhou, MD; Jaya Rajaiya, MD; Mohammad Yousuf, PhD; Gurdeep Singh, and James Chodosh, MD, MPH), University of Oklahoma Health Sciences Center, Provincial Laboratory for Public Health (Canada), and George Mason University demonstrated how evolution has affected the disease potential of a recently identified novel human adenovirus (mBio, April 2013). According to the researchers, understanding viral evolution and pathogenicity is essential for predicting the new and emerging viruses’ potential impact on human disease. These study results point toward a possible approach for predicting pathogenicity for newly identified and recently emergent human pathogens.
Ophthalmology Grand Rounds

Grand Rounds are held every Thursday from 8:00-9:00 am in the Meltzer Auditorium, 3rd Floor, Mass. Eye and Ear and simulcast to the Karp 11 conference room at Boston Children’s Hospital and Mass. Eye and Ear, Longwood. Continuing Medical Education credit is available. A monthly list is posted at www.MassEyeAndEar.org/for-professionals/ophthalmology.

Upcoming Events

The HMS Department of Ophthalmology sponsors an extensive array of special lectures and courses. For details, please consult the Ophthalmology Education section at www.MassEyeAndEar.org. For a complete listing of Schepens events please visit http://www.schepens.harvard.edu/events-and-seminars.html.

SERIES Seminar

2nd Floor Conference Room, Schepens Eye Research Institute

June 17, 2013: David A. Sullivan, PhD

Cornea Center of Excellence Research Seminar Series

Schepens Eye Research Institute

June 21, 2013: Sunil Chauhan, DVM, PhD

SERIES Seminar

2nd Floor Conference Room, Schepens Eye Research Institute

June 24, 2013: Pablo Argüeso, PhD

SERI - Distinguished Lecture Series

2nd Floor Conference Room, Schepens Eye Research Institute

October 17, 2013: Robert Hess, PhD

Cornea Center of Excellence—International Workshop

Mass. Eye and Ear

October 17, 2013

The aim of this one-day workshop, a precursor to the Cornea Conference (see below), is to strengthen our international collaborations in the field of cornea and ocular surface. This event will bring together a multidisciplinary group of scholars, both physicians and scientific researchers, to present current research findings, exchange scientific ideas, and form new collaborations.

28th Annual Biennial Cornea Conference

Starr Center, Schepens Eye Research Institute

October 18 & 19, 2013

Since the 1960s, the Biennial Cornea Conference has explored current basic and translational research developments of the cornea and anterior ocular surface, promoting interaction and discussion among leaders in the field of Cornea. This year’s program sessions include: Epithelial Biology and Ocular Surface, Microbiology and Innate Immunity, Adaptive Immunity, New and Emerging Technologies, Pain and Neurogenic Inflammation, and Regenerative Medicine and Transplantation.

Boston Ophthalmology International Visiting Professor in Cornea and External Eye Disease

Boston University

October 31, 2013: 2:00 pm - 4:30 pm

Mass. Eye and Ear, Meltzer Auditorium

November 1, 2013: 1:00 pm - 6:30 pm

Paola Rama, MD. Course Director: Mary Daly, MD
Strabismus Fall Festival
Mass. Eye and Ear, Meltzer Auditorium
November 2, 2013
8:00 am – 5:00 pm

Through case-based panel discussions and lectures, this one-day course will focus on techniques and advances in strabismus surgery and pediatric ophthalmology. A discussion will follow each surgical case presentation, with follow-up presentations describing actual surgical interventions and post-operative results. A question and answer opportunity will also be available to participants.

Case presentation topics and lectures will include:
• Congenital Strabismus: “Surgical Outcomes in CFEOM” (Gena Heidary, MD, PhD)
• Restrictive Strabismus: “Current Strategies in the Management of Restrictive Strabismus” (Linda Dagi, MD)
• Paretic Strabismus: “When to Obtain a Neuro-op Consultation for Your Strabismus Patient” (Dean Cestari, MD)
• Advanced, Complex Strabismus: “Advanced Surgical Techniques in Complex Strabismus” (David G. Hunter, MD, PhD), and “Surgical Strategies for Cyclovertical Strabismus” (David Guyton, MD)

Inaugural guest lecturer, David Guyton, MD, will deliver a presentation entitled, “Dissociated Vertical Deviation: Mechanism and Purpose.” The course, which is offered by Boston Children’s Hospital and Massachusetts Eye and Ear, is approved by Harvard Medical School, and attendees may accrue 7.5 Category 1 CME credits.

Ocular Genetics and Genomics Symposium
Starr Center, Schepens Eye Research Institute
October 21, 2013

This one-day course will explore recent genetic- and genomic-based advances in the area of inherited eye disease and their impact on the care of patients and their families. Open-ended panel discussions and presentations will review risk factors for common complex eye disorders such as AMD, glaucoma and diabetic retinopathy, as well as disorders caused by highly penetrant mutations, such as inherited retinal degenerations, optic atrophy and strabismus. Discussions will center on therapeutics, ethics, and new methodologies for gene-based testing. Course Directors: Janey Wiggs, MD, PhD, Eric Pierce, MD, PhD, and Luk Vandenberghe, PhD

Pediatric Ophthalmology Visiting Professor Lecture Series
Boston Children’s Hospital (video link to Mass. Eye and Ear)
November 6, 2013: Marilyn Miller, MD, University of Illinois, Chicago

5th Annual Boston Angiogenesis Meeting
Starr Center, Schepens Eye Research Institute
November 7, 2013: Keynote Speaker: Elazer Edelman, MD, PhD, Thomas D. and Virginia W. Cabot Professor of Health Sciences and Technology at Massachusetts Institute of Technology, and Professor of Medicine at Harvard Medical School. Co-chairs: Kip M. Connor, PhD, and Demetrios Vavvas, MD, PhD

SERI - Distinguished Lecture Series
2nd Floor Conference Room, Schepens Eye Research Institute
November 14, 2013: Danny J. Schust, MD

Paul A. Chandler Visiting Professor Lecture
Mass. Eye and Ear, Meltzer Auditorium
December 6-7, 2013: Andrew Lee, MD, Professor of Ophthalmology, Neurology, and Neurosurgery at Weill Cornell Medical College will deliver a lecture on NeuroOphthalmology.

Claes H. Dohlman Visiting Professor
Mass. Eye and Ear, Meltzer Auditorium
December 12-13, 2013: Alan Sugar, MD, Professor and Vice-Chair, Ophthalmology & Visual Sciences, Kellogg Eye Center, University of Michigan

Ruthanne Simmons Lecture
Mass. Eye and Ear, Meltzer Auditorium
February 5, 2014: 5:00 pm
Rand Allingham, MD, Course Directors: Louis Pasquale, MD, and Teresa Chen, MD

MGH Neuroscience Grand Rounds
MGH Etherdome
February 6, 2014: Rebecca Stacy, MD, PhD

9th Annual Ephraim Friedman Lecture
Mass. Eye and Ear, Meltzer Auditorium
February 12, 2014: Srinivas R. Sadda, MD, Associate Professor of Ophthalmology, Keck School of Medicine, USC. Course Directors: Evangelos Gragoudas, MD, and Dean Elliott, MD

Cornea Visiting Professor Lecture Series
Mass. Eye and Ear, Meltzer Auditorium
March 6-7, 2014: Andrew Huang, MD, MPH, Professor of Ophthalmology and Visual Sciences, Washington University School of Medicine

Awards, Grants, and Other Honors
Mary Lou Jackson, MD, received a 2012 Secretariat Award from the American Academy of Ophthalmology. The Secretariat Award recognizes ophthalmologists for special contributions to the Academy and to the field of ophthalmology.

Congratulations to Eliot Berson, MD, and François Delori, PhD, who are the inaugural honorees of the Department’s Clinical and Research Distinguished Achievement Awards, respectively. Drs. Berson and Delori will be honored during the department’s Annual Meeting & Alumni Reunion festivities on Saturday, June 22, 2013. Each will deliver a lecture, with Dr. Berson presenting, “Retinitis Pigmentosa: Diagnosis, Prognosis, and Treatment,” and Dr. Delori presenting, “In Vivo Assessment of RPE Lipofuscin.”

Balraj Menon, PhD, a post-doctoral fellow in the laboratory of Ilene Gipson, PhD, has been named the 2013 Cornea Center of Excellence/Shore Scholar for his project, “Role of the Membrane Mucin
Congratulations to Patricia D’Amore, PhD, MBA, who received the 2013 Everett Mendelsohn Excellence in Mentoring Award from the Harvard University Graduate School of Arts & Sciences (GSAS). This prestigious award, established by the Harvard Graduate Student Council in 1998, honors faculty members who have demonstrated outstanding mentorship of graduate students in academic, professional, and personal endeavors. The award was renamed in 2002 in honor of Everett I. Mendelsohn, Professor of the History of Science at Harvard. Over 75 students submitted nomination letters for 30 faculty members, from which five award winners were selected. Nominees and award recipients were honored on April 10th in an awards ceremony at Harvard University. Among the distinguished speakers were Professor Mendelsohn and GSAS Administrative Dean, Margot N. Gill.

MUC16 in Regulating Innate Immune Responses at the Ocular Surface.” Pablo Argüeso, PhD, Associate Scientist at Schepps, has been named the Scheeps/Shore Scholar for his work, “Role of CD147 Glycans as Modulators of Metalloproteinase Activity at the Ocular Surface.” Jaya Rajaiya, PhD, of Mass. Eye and Ear, also was named a Shore Scholar for her project, “Understanding Molecular Mechanism in Corneal Infection.”

Mass. Eye and Ear Vitreoretinal Fellow in the 2013 graduating class, Dimitra Skondra, MD, was selected to receive the 12th Raymond R. Margherio Award. Dr. Skondra will receive the award during the Retina Society’s 46th Annual Meeting, held in Beverly Hills, CA, September 26-29, 2013.

Dean Cestari, MD, was nominated for the 2013 Harvard Medical School Charles McCabe Faculty Prize for Excellence in Teaching (Years III and IV). The award is named in memory of Dr. Charles McCabe, who served as director of the Surgery Clerkship at MGH for more than two decades.

Several HMS Ophthalmology faculty members were nominated for the 2012-2013 Harvard Medical School Excellence in Mentoring Awards. Congratulations to: Dean Cestari, MD, Kip Connor, PhD, Reza Dana, MD, MPH, MSc, Mary Louise Jackson, MD, Shizuo Mukai, MD, and Douglas Rhee, MD.

Ula Jurkunas, MD, was elected to the Association for Research in Vision and Ophthalmology (ARVO), Cornea Section Annual Meeting Program Committee.

Boston Children’s Hospital Assistant Professor of Ophthalmology, Jing Chen, PhD, was awarded a $120,000 research grant from BrightFocus Foundation for her study of age-related macular degeneration entitled, “Control of Neovascular AMD by Nuclear Receptor RORalpha.”

Michael Gilmore, PhD, has received three grants from the National Institutes of Health (NIH): (1) $364,500 for the study, “Faecalis Pathogenicity Island;” (2) $230,065 for his project, “Identification of Infection-Critical S. aureus Traits by TnSeq;” (3) $220,050 for his project, “Modeling CRISPR to Preserve Antibiotics.”

Ivana Kim, MD, received a new clinical study agreement in the amount of $290,969 from Acucela, Inc. for her project entitled, “A Phase 2b/3 Multicenter, Randomized, Double-Masked, Dose-Ranging Study Comparing the Efficacy and Safety of Emixustat Hydrochloride (ACU-4429).”

Janey Wiggs, MD, PhD, received an R21 grant for her project entitled, “Genetic Risk Factors for Central Vision Loss in Glaucoma,” in the amount of $244,250 from the National Institutes of Health. She also was awarded a $310,000 grant from the March of Dimes Foundation for her project, “Exome Sequencing to Identify Novel Genetic Factors for Congenital Glaucoma.”

Matt Bronstad, PhD, of Mass. Eye and Ear/Schepps received a $60,000 grant from the Knights Templar for his project, “Is Anomalous Retinal Correspondence Compensatory to Hemianopia and Can it Be Reinstated after Strabismus Surgery?”

For the 2013-2014 academic year, nine of the 20 selected Heed Fellows (representing 45 percent of the annual Heed Foundation awards) are either current HMS residents or are conducting their fellowships at one of our HMS Ophthalmology affiliates. Congratulations to:

- Ramez Haddadin, MD - Mass. Eye and Ear, Cornea Fellow
- Cecily Hamill, MD, PhD - Mass. Eye and Ear, Cornea Fellow
- Nahyoung Grace Lee, MD - Mass. Eye and Ear, Ophthalmic Plastics Fellow
- John Miller, MD - Mass. Eye and Ear, Vitreoretinal Surgery Fellow
- Bobeck Modjtahedi, MD - Mass. Eye and Ear, Vitreoretinal Surgery Fellow
- Mrinali Patel, MD - Cornell University, Vitreoretinal Fellow
- Duna Raaoof-Daneshvar, MD - Mass. Eye and Ear, Cornea Fellow
- Deepika Shah, MD, MPH - Mass. Eye and Ear, Cornea Fellow
- Mary Catherine Whitman, MD, PhD - Boston Children’s Hospital/Mass. Eye and Ear, Pediatric Ophthalmology Fellow

Mass. Eye and Ear Clinical Fellow, David Kim, MD, was selected by the Retina Society for the American Academy of Ophthalmology (AAO) Ambassador Program and attended the AAO Midyear Forum in Washington, DC April 10-13, 2013.

Nelly Cruz, PhD, of Dr. Neena Haider’s laboratory at Schepps Eye Research Institute, was awarded first place in the 2013 Research Fellows Poster Celebration, winning the Tayyaba Hasan ORCD Poster of Prestige Award for her poster entitled, “Identification of Nr1d1 as a Genetic Modifier of Nr2e3-Associated Retinal Degeneration.” This poster celebration was sponsored by the Office for Research Career Development at MGH.

Gena Heidary, MD, PhD, Instructor in Ophthalmology at Boston Children’s Hospital, was awarded a blue ribbon...
Personnel Updates

**HMS appointments:**

**Don Bienfang, MD,** Brigham and Women's Hospital, Associate Professor of Ophthalmology

**Eleftherios Paschalis, PhD, MSc,** Mass. Eye and Ear, Instructor in Ophthalmology

**Luk Vandenberghe, PhD,** Mass. Eye and Ear, Assistant Professor of Ophthalmology

**Michael Yoon, MD,** Mass. Eye and Ear, Assistant Professor of Ophthalmology

**Promotions:**

**James Chodosh, MD,** has been named the Associate Director, Cornea and Refractive Surgery Service at Mass. Eye and Ear.

**New Recruits:**

**Han-Ying (Peggy) Chang, MD,** will join Mass. Eye and Ear's Comprehensive Ophthalmology and Cornea Services full-time on September 1, 2013. Dr. Chang completed the HMS Department of Ophthalmology Residency Training Program last Spring and is currently Chief Clinical Fellow of the Cornea, External Disease, and Refractive Surgery Fellowship program.

**Yan Jiang, MD,** will join Mass. Eye and Ear's Ophthalmology Service mid-summer of 2013, following completion of her training from the New England College of Optometry (NECO). Dr. Jiang trained as a physician in China, completed a Mass. Eye and Ear research fellowship in 2008, and then served as a Refractive Surgery Assistant and Ophthalmic Technician for the Cornea Service while attending NECO.

**Eric Ng, PhD,** will join Schepens Eye Research Institute/Mass. Eye and Ear in early July, 2013 as Assistant Scientist. As an independent scientist at Schepens, he will focus his research on neuroprotection and help mentor trainees in Dr. Patricia D’Amore’s laboratory. Dr. Ng is currently based in London at the University College London Institute of Ophthalmology.

Following a one-year cornea fellowship at Devers Eye Institute in Portland, Oregon starting July 1, 2013, Peter Veldman, MD—Chief Resident and Director of the Mass. Eye and Ear Trauma Service during the 2012-2013 academic year—will be joining the full-time faculty of the Mass. Eye and Ear Cornea and Refractive Surgery Service in late summer of 2014. Dr. Veldman plans to remain active in the residency training program and in international vision care.

**Matt Goodman, OD,** will be joining Mass. Eye and Ear full time in the Optometry and Contact Lens Service starting July, 2013. Dr. Goodman received an OD with high distinction from Pacific University in 2012 and is the 3rd graduate of the HMS Optometry Residency Program.

**Departures:**

**Daniel Esmaili, MD,** has relocated to the west coast where he has joined the Retina Consultants of Los Angeles. During the last few years, Dr. Esmaili made many excellent contributions to the department as a teacher, researcher, and clinician. As Site Director of Retina Associates in Stoneham, he oversaw a smooth transition to our new Site Director, Deeba Husain, MD, who joined the department in May, 2013. Dr. Esmaili has been an important contributor and we wish him the very best.

**Sotiria Palioura, MD, PhD,** Honorable Mention, Resident: “The Boston Keratoprosthesis Type I in Mucous Membrane Pemphigoid”

**Yoshihiro Yonekawa, MD,** Honorable Mention, Resident: “Conversion to Afiblerecept For Chronic Refractory or Recurrent Neovascular Age-Related Macular Degeneration”

**Joan W. Miller, MD, FARVO,** recently took over as President of NEOS this spring, and **Kathryn Colby, MD, PhD,** was appointed to the position of Chair of the Ophthalmic Services Committee for NEOS. Additionally, former resident and fellow, and current faculty member, **Mark Latina, MD,** presented the Chandler Grant Lecture at the NEOS meeting; Dr. Latina was introduced by **Teresa Chen, MD,** President of the Chandler Grant Society.

In other NEOS news, Chief and Chair, **Joan W. Miller, MD, FARVO,** recently took over as President of NEOS this spring, and **Kathryn Colby, MD, PhD,** was appointed to the position of Chair of the Ophthalmic Services Committee for NEOS. Additionally, former resident and fellow, and current faculty member, **Mark Latina, MD,** presented the Chandler Grant Lecture at the NEOS meeting; Dr. Latina was introduced by **Teresa Chen, MD,** President of the Chandler Grant Society.

**Robert Pineda II, MD,** Associate Professor of Ophthalmology, traveled to Navi Mumbai, India as an invited speaker at a March international conference on laser vision correction. The conference, “Demystifying Advances in Cornea and Refractive Surgery,” was hosted by the Advanced Eye Hospital and Institute.

First responders to the Boston marathon bombings were honored at the United Way Healthcare Breakfast on May 29 at the Boston Park Plaza Hotel. Mass. Eye and Ear Resident, **Yoshihiro Yonekawa, MD,** was nominated by his peers to be an honored invitee.

A Key Milestone in KPro Development

The FDA has approved use of metal titanium (back plate) on the KPro device, which will markedly improve the long-term safety of the KPro. FDA approval also should help facilitate CE (European Conformity) Mark approval for KPro distribution in the European Union.

Congratulations to **Claes Dohlman, MD, PhD,** James Chodosh, MD, **Larisa Gelfand, COT, MAEd,** and the entire KPro team!
Service

In letters of thanks, the American Academy of Ophthalmology (AAO) recognized Sherleen Chen, MD, Roberto Pineda II, MD, Pedram Hamrah, MD, Mark Hatton, MD, Kathryn Colby, MD, PhD, Gena Heidary, MD, PhD, Dean Cestari, MD, and Teresa Chen, MD, for their invaluable volunteer contributions this past year. Their efforts have “helped advance the mission of AAO and the profession of ophthalmology worldwide.” AAO ensures that the profession maintains the very best standards of practice, continuing medical educational activities, and self-assessment programs.

Selected Publications

Novel Murine Model for Primary Open Angle Glaucoma: A major collaborative study undertaken, in part, by Emmanuel Buys, PhD, and other members of the HMS Department of Ophthalmology Glaucoma Center of Excellence, was published March 20th in PLOS ONE.

Demetrios Vavvas, MD, PhD, published two articles in Investigative Ophthalmology & Visual Science in April: one entitled, “Anti-VEGF in Retinopathy of Prematurity, Need to Titrate,” and a co-authored article with Tomasz Streyowski entitled, “Genetic Correlates of Proliferative Vitreoretinopathy.”

Louis Pasquale, MD, FARVO, and colleagues found that prostaglandin analogues, a common treatment for glaucoma, can cause a side effect that could affect patients’ vision. Past findings have led to changes in drug labeling and these findings could do the same. The article, “A Cross-Sectional Survey of the Association between Bilateral Topical Prostaglandin Analogue Use and Ocular Adnexal Features,” was published in the May issue of PLOS ONE.

In the April-May issue of Middle East African Journal of Ophthalmology, Louis Pasquale, MD, FARVO, and co-authors examine teleglaucoma, the application of telemedicine for glaucoma. The authors review and present the current literature on teleglaucoma; present their experiences with teleglaucoma programs in Alberta, Canada and Western Australia; and discuss the challenges and opportunities in this emerging field.

In the Press

Baseball’s Oddest Fraternity: March 5, 2013 (Wall Street Journal) Daniel M. Laby, MD, Mass. Eye and Ear clinical faculty member and staff ophthalmologist for the Boston Red Sox, was quoted in an article on eye dominance in baseball.

Therapy is Littleton Girl’s Only Glimmer of Hope to Keep Her Eyesight: March 8, 2013 (The Lowell Sun) Six-year-old Finley Fletcher of Littleton—a patient of Eric Pierce, MD, PhD—has Leber congenital amaurosis (LCA). The Plecters and 15 other families who have children suffering from RDH12 LCA formed RDH12 Fund for Sight, a non-profit organization that has raised $900,000 to date.

Wanting to Be Like Shea—or Not: March 24, 3013 (Boston Globe) Nine-time tri-athlete, Carolyn Shea, COMT, Manager of the Glaucoma Service at Mass. Eye and Ear, ran in the Boston Marathon with Team Eye and Ear to raise money to help patients with the cost of their glaucoma medications.

Newton Father Running Boston Marathon to Save Son’s Vision: April 2, 2013 (Boston CBS Local) Bruno Miguel’s son, Quentin, was born with juvenile retinoschisis, a genetic condition that caused layers of his retina to split. Mr. Miguel ran in the Boston Marathon with Team Eye and Ear with the goal of raising $10,000 to support the hospital and the research efforts of Quentin’s doctor, Shizuo Mukai, MD. Mr. Miguel raised $15,590, and Team Eye and Ear raised more than $300,000.

4 Hospital Lobbies Provide a Healthy Perspective: April 2, 2013 (BDC Network) The interior of Mass. Eye and Ear, Longwood—which was designed to compensate for patients’ issues with depth perception, color perception, and other vision impairments—was featured in an article that compared interior designs of four healthcare lobbies.

Book of Friends: Celebration Honors Dr. Simmons Lessell, Outstanding Neuro-Ophthalmology Contributions

Simmons Lessell, MD, is one of the department’s most respected faculty members, and is well known as a gifted clinician, teacher, and mentor. A master at leading weekly Grand Rounds, he has gained nearly legendary status for his keen insight and quick wit during his presentations. On May 25, 2013, Dr. Lessell celebrated his 80th birthday with close colleagues and former fellows during the Simmons Lessell Festschrift. Following opening remarks from Joe Rizzo, MD, 20 former fellows, spanning 1981 to 2012, delivered short presentations; titles ranged from “How to Fall in Love with a Saccade” (Jon Curie, MBBS, FRACP, FACHAM, Boston University Fellow 1982-1984) to “Training and Selecting the Next Generation of Ophthalmologists” (Nicholas Volpe, MD, Mass. Eye and Ear Fellow 1991-1992). This heartfelt tribute and celebration, like Dr. Lessell’s inspiring contributions, won’t soon be forgotten.

Dry Eye Symptoms Eased by Rebamipide, a Mucin Secretagogue: April 4, 2013 (Medscape Medical News) Pedram Hamrah, MD, Director of the Ocular Surface Imaging Center at the Mass. Eye and Ear, provided commentary on a multicenter randomized clinical trial of 188 patients with dry eye treated with rebamipide ophthalmic suspension.


Drugs Commonly Used To Treat Glaucoma May Cause Droopy Eyelids and Other Side Effects That Can Interfere With Vision: May 24, 2013

NEWS FROM ALL OVER

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Alumni News

Mass. Eye and Ear/HMS alumni, David R. Guyer, MD, and Samir Patel, MD, are on the newly expanded management team at Ophthotech, a privately held ophthalmic biopharmaceutical company. Dr. Guyer accepted the position of Chief Executive Officer, and Dr. Patel was appointed to the additional role of Vice Chairman of the Board. Ophthotech Corporation recently raised $175 million to finance a global Phase 3 clinical program of its lead compound Fovista™, an anti-platelet-derived growth factor (PDGF), in combination with anti-VEGF therapy for the treatment of neovascular age-related macular degeneration. Dr. Guyer and Dr. Patel were Retina Fellows at Mass. Eye and Ear.

Dr. M. Roy Wilson, a deputy director of the National Institute on Minority Health and Health Disparities, has been named as the new President of Wayne State University. Dr. Wilson is an academic administrator, international researcher and ophthalmologist who trained at Harvard Medical School and completed his ophthalmology residency and glaucoma fellowship at Mass. Eye and Ear. In 1998, he was appointed dean of Creighton University School of Medicine, making him one of the first African-American ophthalmologists to be appointed dean of a major medical school. Dr. Wilson’s research has focused on low vision and blindness among populations ranging from the Caribbean to West Africa.

Former Mass. Eye and Ear Research Fellow (1999-2003) and Harvard Medical School faculty member (2003-2010), Margaret DeAngelis, PhD, invented a new diagnostic method for prognosing, detecting, and treating age-related macular degeneration, and the innovation is moving along in the patent application process. Patent application #544454 is assigned to Massachusetts Eye and Ear Infirmary; it was filed on July 9, 2012 and made available online on May 23, 2013. Dr. DeAngelis is an Associate Professor Ophthalmology/Visual Sciences at the Moran Eye Center at the University of Utah, School of Medicine.

A former resident and fellow (Immunology and Uveitis, and Medical and Surgical Diseases of the Retina and Vitreous) at Mass. Eye and Ear, Quan D. Nguyen, MD, was named the McGaw Memorial Endowed Chair in Ophthalmology and the Director of the Stanley M. Truhlsen Eye Institute at the University of Nebraska Medical Center in March, 2013.

Deanna P. Ricker, MD, (Harvard Medical School, class of 1973, and fellowship trained at Mass. Eye and Ear in Eye Pathology) received the 2013 Community Clinician of the Year for the Middlesex District Medical Society. This award recognizes physicians who have made significant contributions to their patients and the community and who stand out as a leading caregiver. Dr. Ricker has served the state medical society in a variety of capacities and is currently an ophthalmologist in private practice in Needham, MA.

WBUR ran a story, “Caring for Kevin: An Autistic Man, An Exceptional Doctor, A Life Renewed,” profiling Susannah Rowe, MD (HMS/Mass. Eye and Ear alumna, residency class of 1997). Dr. Rowe established Boston Medical Center’s Exceptional Vision Service to offer a more compassionate and personalized approach to caring for special needs patients.

Attending surgeon on the Oculoplastic and Orbital Surgery service at Wills Eye Institute, Jurij R. Bilyk, MD, was recently promoted to Professor of Ophthalmology at Thomas Jefferson University. Dr. Bilyk completed his residency in ophthalmology at Wills Eye Hospital and an oculoplastic and orbital surgery fellowship training at Mass. Eye and Ear.

In Memoriam

William T. Humphrey, MD, of Virginia passed away on April 1, 2013 at the age of 76. Dr. Humphrey attended Harvard Medical School, where he completed a fellowship in Vitreous-Retina Surgery at Mass. Eye and Ear. In 1971, he joined the Harvard Medical School faculty and taught retina surgery until he established the first ophthalmology subspecialty practice in Retina-Vitreous Surgery in the Tidewater area of Virginia in 1972. He remained active in private practice until 2003. Dr. Humphrey helped co-founded, along with many devoted colleagues, the Department of Ophthalmology at Eastern Virginia Medical School and was its first chairman from 1975 to 1982. He also co-founded the Lions Eye Bank and the Tidewater Virginia Eye Foundation. Dr. Humphrey is survived by sons, Dr. William T. Humphrey Jr. and his wife Diane, and John Douglas Humphrey; and his sister, Jane Humphrey Highland.

Scott Emery Burk, MD, PhD, age 45 of Cincinnati, OH passed away on March 21, 2013 after a long illness. Born in Akron, OH, Dr. Burk earned a medical degree from U.C. College of Medicine and a PhD in molecular genetics prior to completing his Ophthalmology residency at Harvard Medical School. He then completed a fellowship in Cataract and Refractive Surgery at the Cincinnati Eye Institute where he entered into medical practice. A consummate physician and scientist, he had a profound influence on the fields of neuroscience, immunology and ophthalmology. Dr. Burk was a loving husband to Andrea Da Mata; devoted father to Alec, Ana and Scott; loving brother to Perry and the late Todd; and dear son to Bill and Carol Burk.

S. Arthur Boruchoff, MD, passed away at the age of 88 on May 28, 2013. Dr. Boruchoff completed his undergraduate work at Harvard University, received his MD from Boston University School of Medicine and his MSc from New York University. He joined the Cornea Service at Mass. Eye and Ear and remained on staff until 1993. Most recently Dr. Boruchoff was Professor of Ophthalmology at Boston University Medical School until his retirement. A noted cornea specialist, Dr. Boruchoff received the Dohlmian Award from the Cornea Society in 2011 in recognition of his lifetime of teaching excellence in the field of cornea and external disease and for his contributions to the field. Husband to the late Dr. Anna Silverman Boruchoff, Dr. Boruchoff was the son of the late Henry and Frances Boruchoff. He is survived by his children, Susan, David, and Judith; and his brother, Leo.
SAVE THE DATES

28th Biennial Cornea Conference

October 18-19, 2013

Held at the Schepens’ Starr Center at 185 Cambridge Street in Boston, this premier anterior segment conference explores current clinical and laboratory research aimed at generating new treatments for the numerous disease entities that afflict the front part of the eye.

For more information:
Contact cornea_conf@meei.harvard.edu

To register:
Visit www.schepens.harvard.edu/registration/cornea-conference-links/registration.html

Ocular Genetics and Genomics Symposium

October 21, 2013

Participants in the one-day course at the Starr Center at Schepens will explore recent genetic- and genomics-based advances in addressing inherited retinal eye diseases, and the impact on patient care and patients’ families.

For more information, see page 15.

Strabismus Fall Festival

November 2, 2013

Offered by Boston Children’s Hospital and Massachusetts Eye and Ear, this new one-day course features case-based panel discussions and lectures that explore techniques and advances in strabismus surgery and pediatric ophthalmology. Held in Meltzer Auditorium at Mass. Eye and Ear, this course features guest speaker, Dr. David Guyton.

Attendees may accrue 7.5 Category 1 CME credits on Saturday, November 2, 2013, which is several weeks before the annual AAO meeting.

For more information, see page 15.