

# Eyewitness

THE NEWSLETTER OF THE HARVARD MEDICAL SCHOOL  
Department of Ophthalmology



SPRING/SUMMER 2012 #20

## NOTES FROM THE CHAIR



Joan W. Miller, MD, FARVO  
Chief and Chair

## Education: A Mission on the Move

Every year at graduation, I am reminded that teaching our brilliant young trainees is both a gift and a profound responsibility. The value that education brings to our mission is not always as tangible (or sexy!) as say, discovering a new gene or restoring sight to patients with a new drug or device. But its value should never be understated or taken for granted. Our residency and fellowship programs attract the highest achievers from around the world because our HMS Ophthalmology community has a historical and cultural commitment to education that offers trainees an unsurpassed learning experience.

Through close teamwork and mentorship, our dedicated faculty strive to graduate accomplished clinicians and scientists poised for leadership in their chosen area of ophthalmic medicine and science.

Helping our trainees reach their leadership potential is one of the distinguishing features of our program. Like my colleagues, I take pride in the fact that nearly all of our residents seek fellowship training, and 60 percent of them pursue academic careers after fellowship. Once career-bound, many of our graduates eventually take up the mantle of leadership; today, about 1 in 6 ophthalmology department chairs in the United States and Canada are HMS postdoctoral alumni. Whether here at HMS or somewhere else on the globe, our alumni continue to influence and advance progress in our field.

As we take the time to recognize and applaud the achievements of our latest class of graduates, it is also a good opportunity to highlight some of the recent and exciting initiatives that continue to make our program one of the best in the world. Under the leadership of John I. Loewenstein, MD, HMS Vice Chair for Medical Education and Director of the HMS Department of

*continues on page 4*

## It's a go! Innovative Mass. Eye and Ear Cataract Master™ Helps Residents Master Phaco Surgery

The Mass. Eye and Ear Cataract Master™, a new and highly innovative, computer-based simulation tool designed to teach residents phacoemulsification cataract surgery, is now available to ophthalmology residency programs and the ophthalmology community worldwide. Nearly a decade in the making, the Cataract Master™ was co-developed by Harvard Medical School Residency Training Program Director, John I. Loewenstein, MD, Bonnie An Henderson, MD, FACS, Adam Neaman PhD, and several of their colleagues. The Cataract Master™ received an enthusiastic reception during its official debut at the American Society of Cataract and Refractive Surgery (ASCRS) annual meeting in April. Mass. Eye and Ear has licensed the English version of the program to ASCRS for worldwide distribution over the internet.

The Cataract Master™ represents a unique approach to bridging the gap between wet lab training and live patient surgery. The concept for the software program coincided with the advent of advances in computer technology and



*continues on page 3*

# Dr. Kloek Brings Innovation to Student Training Through Rabkin Fellowship



Dr. Carolyn Kloek, a member of the Comprehensive Ophthalmology Service at Mass. Eye and Ear and Associate Director of the Harvard Medical School Residency Training Program, is one of six Harvard Medical School faculty - and the first HMS Ophthalmology faculty member - to be awarded the prestigious Harvard Medical School Rabkin Fellowship in Medical Education for the academic year 2011-12.

The Rabkin Fellowship is based at Beth Israel Deaconess Medical Center but open to faculty from any HMS-affiliated institution. The Fellowship provides formal training and mentors to HMS faculty who demonstrate interest and promise in becoming leaders in medical education. In addition to attending weekly seminars on numerous topics that span education, management, leadership, research study and design, each Fellow completes a project under the mentorship of a well-established medical educator in his or her field.

As Associate Director of the residency program, Dr. Kloek is already deeply committed to medical education. She has been involved in the development of several new and innovative approaches to training ophthalmology residents, particularly in the area of cataract surgery. She was also a vital member of the team that developed the recently launched Mass. Eye and Ear Cataract Master™ and for her contributions to this effort she received an HMS Shore Fellowship in AY 2009-10. Now, through her Rabkin Fellowship, Dr. Kloek is developing a standardized online curriculum that could vastly enhance the ophthalmic training of medical students across the country.

Ophthalmology frequently receives only cursory attention in the typical medical school curriculum, according to Dr. Kloek. In fact, some medical schools do not have an ophthalmology curriculum at all.

“Given the time constraints, and the wide range of medical topics that must be covered in medical school, ophthalmology often gets short shrift compared to other specialties,” she explained. “But vision and eye health are critical. At a minimum, internists need a baseline understanding of eye anatomy and basic disease pathology so they can triage vision problems.”

To address this need, Dr. Kloek is creating an online, case-based program to teach medical students the core ophthalmology curriculum. Once complete, it will comprise eight guided, interactive modules on topics covered in *Basic Ophthalmology*, the widely-used textbook published by the American Academy of Ophthalmology. Dr. Kloek utilized HMS virtual patient software to build the training modules around virtual patient ophthalmology cases. Medical students using the modular program will progress through the standard ophthalmology curriculum at a self-directed pace, on their own time.

Dr. Kloek is currently developing modules for eye trauma, diabetic retinopathy, retinal vascular disease, common ophthalmology consults, evaluation of the optic disc, glaucoma and vascular problems with the eye. Each module will take students through typical cases, describing correct treatment steps, and offering multiple decision points. Students will have the benefit of real-time feedback on their responses. The curriculum will prepare graduates to more effectively triage and manage a wide variety of ophthalmic diseases. Throughout her year-long fellowship, Dr. Kloek has received guidance from fellowship directors, Lori Newman, MEd, and Chris Smith, MD, and fellowship project mentor, Grace Huang, MD.

As part of her Fellowship project, Dr. Kloek is also developing a beta test to evaluate the training program’s effectiveness. Once implemented, Dr. Kloek’s innovative curriculum has the potential to raise ophthalmic training standards in medical schools across the country and to improve patient care. The eight-module training series may eventually be made available to Continuing Medical Education programs, as well. ■

## In this issue:

Notes from the Chair.....Cover

Mass. Eye and Ear Cataract Master™ Helps Residents Master Phaco Surgery.....Cover

Dr. Carolyn Kloek Brings Innovation to Medical Student Training..... 2

Burgeoning Academic Partnership Promotes New Ideas, Opportunities..... 6

2012 Resident and Fellow Graduates..... 8

Alice McPherson, MD, Receives the HMS Distinguished Alumni Professional Achievement Award ..... 11

Joan O’Brien: 2012 Mariana Mead Lecturer ..... 11

Eyes on Research..... 12

News from All Over ..... 14

Remembering a Master Mentor: The Robert Brockhurst Academic Development Award..... 19

Save the Dates!..... 20

**Published three times a year:**

Joan W. Miller, MD, FARVO, Editor  
 Suzanne Ward, Publications Manager  
 Karen M. Bernstein, Editorial Specialist  
 Wendy Chao, PhD, Contributing Writer  
 Laurie Covens, Contributing Writer



virtual reality surgical simulation in medical training in the early 2000s. Watching this new technology develop and become a mainstay of medical education, Dr. Loewenstein recognized its potential for residency surgical training. He also recognized its flaws. “As important as these simulations may prove,” he explains, “it struck me that they were missing a crucial element. Unless an experienced eye surgeon was at the trainee’s side, students would be on their own to recognize and correct errors in their technique. These tools had no provision for teaching the cognitive, decision-making aspects of surgery.”

While she was the Director of the Comprehensive Ophthalmology Service at MEEL, Dr. Henderson’s main role was in cataract surgery education. “Surgery is still taught by an apprenticeship method by first watching surgery, then learning how to operate on real patients,” noted Dr. Henderson. She mentored many struggling residents over the years and realized that there must be a better way of teaching.

Cataract surgery is one of the most frequently performed eye surgeries in the United States and one of the most complex procedures to learn, requiring mastery of both cognitive (decision-making) and motor (hand/foot surgical controls) skills. Residents typically train in a wet lab scenario and on simulators that supplement motor skills training (i.e. EYESI® simulators), then move directly to live patients; this is a challenging leap for surgeons-in-training, even with the most careful oversight by attending physicians.

And there are hundreds of potential decision-making issues that can arise during surgery. Developing a simulator that integrated the complex concepts and steps of phaco surgery into a “thinking” simulation proved exceptionally challenging. Dr. Loewenstein, whose subspecialty is retina, brought together Dr. Henderson, a highly regarded phaco surgeon, and computer learning expert, Adam Neaman, PhD. Their goal was to figure out how to apply the technology and methods to a curriculum-based training tool that would better prepare residents for the operating room. As a cataract surgeon and a surgical preceptor, Dr. Henderson was able to build into the program the most common mistakes that she witnessed from resident-performed phacoemulsification surgery.

According to Dr. Loewenstein, a key development challenge was to separate the cognitive from the motor skill aspects of training. “Over the years I’ve observed intelligent, well-prepared residents ‘freeze’ during early surgical cases,” he recalls. “Many of these residents could recite the necessary steps of the procedure outside of the OR; nevertheless, something changed when they had to not only recall what to do, but had to make unfamiliar hand and foot movements, recognize what was going on inside the eye, etc. It seemed the problem was at a cognitive, not a motor level. Trainees were experiencing ‘cognitive overload’—too many things to think of and keep track of at the same time.”

Dr. Henderson concurs. “The Cataract Master™ not only teaches the steps of phaco, but challenges trainees to manage and/or avoid virtually every imaginable surgical complication. This type of immersion learning is simply not possible any other way, and provides an excellent transition to the operating room.”

The Cataract Master™ format is self-guided, self-correcting curriculum that requires trainees to make decisions based on realistic surgical situations. The simulator contains a screen that shows surgical animations and videos of actual surgical examples, complete with expert discussions on details of the surgery. The interactive program anticipates typical questions that a trainee may ask, with pop-up questions that relate to various steps of the surgery. The decisions of trainees are then animated on-screen. If the surgeon-in-training makes a serious error, videos provide immediate feedback explaining how the problem occurred, what to do to fix it, and how to avoid making the same mistake again. This essentially allows new surgeons to learn from their mistakes and to master life-like surgery without risking injury to a patient. A full help and reference section is also available.

To test its effectiveness Drs. Henderson, Loewenstein, and colleagues conducted a multicenter, randomized trial at eight residency programs. The results demonstrated that the methods utilized by the Cataract Master™ led to truer learning as compared to traditionally used teaching tools. Residents reported that they enjoyed using the program and preferred this method of learning. The study results were published in the journal, *Ophthalmology*, in February 2010. Bradford J. Shingleton, MD, a colleague from Ophthalmic Consultants of Boston, who beta tested the program said, “This is an exceptional product that has enormous potential. I follow simulation research in other areas and there is no question that simulation training is getting more sophisticated and (this) program, in particular, is well-suited to ongoing modification.”

The benefits of the Cataract Master™ are numerous. The computer simulation tool is accessed directly from a PC, which allows residents to practice surgery any time, without a teacher or instructor present. This promotes more rapid learning while also reducing cost, management, and scheduling issues. It’s also an ideal training tool for

*“The Cataract Master™ is a unique and original instructional tool for phacoemulsification cataract surgery. The animated simulation provides a realistic interactive experience - with advice along the way via video clips of experts in the field - based on trainee surgical decisions during the exercise. It is an outstanding tool to teach the thought processes and decision-making skills of cataract surgery — highly recommended for ophthalmology resident training.”*

*Anthony Arnold, MD  
Residency Program Director  
Jules Stein Eye Institute  
UCLA Dept. of Ophthalmology*

### *Cataract Master, continued from page 3*

practitioners who want to hone their skills and improve their understanding of how to better manage surgical complications.

And, with more than 1.5 million cataract surgeries conducted in the U.S. each year, the potential benefit to patients is clear. “The Cataract Master™ aims to minimize clinical risk while providing residents and practicing ophthalmologists with the most authentic cataract surgical experience possible outside the OR,” Dr. Loewenstein notes. “We fully expect this advanced tool to boost skills and confidence, and to better prepare residents for their surgical experience.”

The Cataract Master™ may also prove to be a vital tool in addressing the pressing global need to train more cataract surgeons worldwide in phacoemulsification techniques –

especially in underdeveloped countries. “Ultimately, our goal is to overcome barriers to training by reducing costs and improving access to quality training tools like the Cataract Master™,” said Dr. Loewenstein. “This will help raise the standards of patient care everywhere.”

Seed funding to develop the program was provided by the Massachusetts Lions Club and the Norman Knight Foundation. Grants from the U.S. Army and the HMS Department of Ophthalmology supported completion of the program. A second version of the program is in the planning stages. To support this efforts please contact: Melissa Paul in the Mass. Eye and Ear Development Office at 617-573-4168 or email: [melissa\\_paul@meei.harvard.edu](mailto:melissa_paul@meei.harvard.edu). ■

---

### *Notes from the Chair, continued from cover*

Ophthalmology Residency Training Program; Simmons Lessell, MD, Director of Medical Student Education, and Dean Cestari, MD, Chair, Fellowship Committee – and with the support of our superb faculty – we continue to innovate ideas, methods, and tools that keep us on the leading edge of education.

#### **Continuing Innovation**

Our cover story, for example, celebrates the launch of the Mass. Eye and Ear Cataract Master™, a unique and highly innovative online software program that helps students to master the cognitive aspects of cataract surgery. As you’ll read, the Cataract Master™ is truly in a class by itself and has tremendous potential not only to improve resident training but to raise standards of care for the millions of patients who undergo this procedure each year. The program was beta tested at eight residency program sites and received rave reviews from residents who were excited by the program’s engaging format. We’ve licensed the program to the Association for American Society of Cataract and Refractive Surgery for distribution over the internet in order to make it available to all residency programs and practicing ophthalmologists in the U.S. and abroad. I urge you to check out a demo of this very cool tool at [www.cataractmaster.org](http://www.cataractmaster.org).

You’ll also read about Dr. Carolyn Kloek, Associate Director of the HMS Residency Training Program, who is one of six HMS faculty – and the first ophthalmology faculty member – to receive a prestigious HMS Rabkin Fellowship Award in academic year 2011-12. Already a committed educator, the award recognizes Dr. Kloek’s numerous contributions to our academic mission and to her outstanding potential as a future leader in education. As a Rabkin Fellow, Dr. Kloek is receiving support to develop a standardized online ophthalmology curriculum for medical school students. The project is designed to address a crucial gap in ophthalmic

education, which is often given low or no priority in medical school curriculums across the country. We anticipate that, once complete, this self-paced, educational tool will significantly enhance training and standards of medical student education nationwide.

#### **Learning at Every Level**

Besides innovation, our academic mission is about creating challenging and fulfilling opportunities for students and trainees that inspire them throughout their careers. During the last several years, Dr. Simmons Lessell and Deborah Jacobs, MD, Director of the HMS Core Medicine Clerkship, have revitalized the core and elective curriculums for HMS medical students to emphasize a dynamic, integrated format. Medical students gain a strong foundation in ophthalmology during their 2nd and 3rd years of core training, which they can augment their senior year with unique electives that emphasize hands-on, mentored training. During a four-week rotation, for example, students are immersed in the challenge of our busy, 24/7 emergency room and trauma center, working in tandem with our residents. A second, advanced elective gives qualified students the opportunity to pursue one of more than 30 ophthalmology electives; this unique, modified apprenticeship program engages students in a focused clinical or laboratory investigation with one-on-one, mentored guidance. Students gain first-hand knowledge of the field, an experience that has inspired many of them to pursue a career in ophthalmology. Most importantly, all students leave medical school training with a basic foundation in ophthalmology regardless of their chosen field of medicine.

During the last few years, Drs. Loewenstein and Kloek have worked with our cataract and cornea faculty to integrate several key program innovations into the residency training program. Beginning in the first year, a progressive surgical curriculum provides a graduated learning process for

trainees, as well as greater surgical exposure with a cataract rotation in Year 2. These enhancements redistribute the traditional third year “blast” of surgical training so that residents gain OR experience much earlier in their careers, and have more time to reinforce core surgical skills. Drs. Loewenstein and Kloek also introduced modular stepwise training of phacoemulsification surgery for second year residents. This involves mastering the individual steps of phaco surgery instead of the entire procedure at once. Trainees report that this model helps them learn more efficiently and improves recall of surgical steps. Complementing their clinical experience, residents now benefit from a formally structured wet lab curriculum that is proctored by faculty and fellows. We’ve also invested in out-of-class, self-paced training tools, like the EYESI® Surgical Simulator. Together with the Cataract Master™, students now have the high-tech resources to hone both their motor and cognitive surgical skills – truly a first in innovation and learning. Together, all of these efforts streamline the learning process, help residents build confidence and, most importantly, prepare them to be outstanding ophthalmologists.

Under the direction of Dr. Dean Cestari and based at several HMS affiliates, our clinical fellowship programs span nine subspecialties and are designed to prepare fellows to evaluate and manage the most difficult clinical cases while fostering their professional development through teaching and research. Clinical fellows have access to advanced diagnostic equipment, as well as the broad research activity and clinical stimulation across our HMS affiliate community. Our growing HMS-affiliate partnerships, and the recent unification of Schepens Eye Research Institute and Mass. Eye and Ear, have increased opportunities for fellows across the educational spectrum, spurring new conferences, teaching activities, and forums for collaboration. Likewise, as we gain momentum in our Ocular Genomics Institute and HMS Centers of Excellence, fellows will have exciting new opportunities and exposure to avant-garde areas of study while working closely with some of the brightest minds in science.

A similar level of opportunity exists for our 100+ research fellows. A wide variety of research opportunities spanning every major area of ophthalmic study are available at Mass. Eye and Ear, Schepens Eye Research Institute, as well as our other Harvard affiliates.. Contributions from our research fellows are integral to the translational work of the department; fellows are often immersed in the full cycle of scientific discovery, which can range from experimental design to clinical evaluation to publication



During the last several years, Dr. Simmons Lessell (pictured) and Deborah Jacobs, MD Director of the HMS Core Medicine Clerkship have revitalized the core and elective curriculums for HMS students to emphasize a dynamic, integrated format.

and implementation. A variety of activities to enrich the training experience are offered including seminars, workshops, poster sessions and luncheons – all designed to bring trainees together on a regular basis, and provide forums for presentation of work in progress. By the end of training, qualified individuals are well-equipped to pursue independent careers in the basic or clinical aspects of vision and eye diseases.

### Education - A Universal Language

In today’s global and interconnected society, we also need to establish solid international connections that provide value to our partners and to our efforts, and expand educational opportunities for our trainees. For example, our long-standing educational partnership with Aravind Eye Hospital in India gives senior residents a unique venue to broaden their clinical and surgical experience in an international setting. Most of our residents choose to augment their skill set with a rotation at Aravind in their senior year, and always report an excellent experience.

More recently, an academic and research partnership with the Eye and ENT Hospital at Fudan University, launched in December 2010, continues to gain steam. This exciting collaboration has led to several meaningful exchanges between our institutions; we’ve explored academic and research collaborations with our Fudan colleagues and, in July, 2011 sent third-year HMS resident, Nancy Huynh, MD, overseas as the first ophthalmology resident in the U.S. to do a formal rotation at the Eye and ENT Hospital. Dr. Huynh participated in Grand Rounds, lectures and clinics; she reported that the synergy, energy and enthusiasm between our two institutions is “great” and will help the hospital in its efforts to establish a formal residency training program. Future exchanges and exciting initiatives are in the works. (See page 6.)

### Staying the Course

By any measure or standard, our ophthalmic training program is one of the best in the world. And each year, the fruits of our labor are reflected in what our graduates - during their brief careers as ophthalmology trainees - learn, accomplish, and contribute to our three-tier mission and to the ophthalmology community. For a short period of time, we have their time and their talents; as a community, we intend to continue to make the most of it. Keeping our programs fresh and dynamic, and continuing to carve out innovative opportunities for our trainees is the academic mantra that we will continue to pursue.

Congratulations to our HMS Department of Ophthalmology Class of 2012. ■

## Burgeoning Academic Partnership Promotes New Ideas, Opportunities

**I**n an ongoing effort to expand global collaborations and international outreach, the HMS Department of Ophthalmology has cultivated an educational and research partnership with Eye and ENT Hospital of Fudan University, and is exploring additional academic opportunities in Beijing. As part of this effort, an exchange program was launched in December 2010. Since then, several exchanges between the two institutions have taken place. These collaborations have proven extremely successful and well-received thus far, with positive feedback all around.

### Take-home Lessons of the HMS Department of Ophthalmology Residency Training Program

In the spring of 2011, five Eye and ENT faculty members from Fudan University traveled to Boston to learn more about the HMS Department of Ophthalmology Residency Training Program. Faculty members gained first-hand exposure to the residency curriculum and a full range of department activities. Faculty members shadowed Mass. Eye and Ear clinicians in their respective fields of cornea, retina, glaucoma and cataracts; they also attended educational programs and lectures, and met with investigators at Harvard-affiliate institutions (including Schepens Eye Research Institute, Joslin Diabetes Center, and Boston Children's Hospital) to explore potential research collaborations.

Following their eight-week stay, Fudan faculty members shared their thoughts about their experiences. They were unanimously impressed with the residency curriculum, particularly the balance between supervised and independent training. "I believe [this] is an extremely important point in education," says Dr. Ling Chen. "Keeping the balance of supervision and independence is the key point that we will translate into our system." Fudan faculty members also noted how HMS Ophthalmology residents are often the first to identify and diagnose many ophthalmic conditions, even in the emergency room; they often examine the patient before the attending physician, and teaching points can be made on the spot or during chart rounds after the examination. "I think this is very important for residents to make progress," says Dr. Yanqiong Zhang, a retina specialist. "If the residents can solve the problem, they can practice all by themselves and if there is any mistake, the attending will point it out and correct it." Dr. Yi Luo agrees. "It offers a great opportunity for residents to solidify their clinical knowledge," she says.

Some faculty members expressed surprise at the breadth of training that ophthalmology residents receive in the United



Dr. Huynh visits the ophthalmology research center at FEENT. (L to R) Dr. Yi Luo, Ophthalmology Residency Program Director; Dr. Nancy Huynh; and Dr. Wu Ji Hong, Director of Ophthalmic Research.

States—particularly at HMS. "It was initially shocking for me to learn that cornea and glaucoma specialists in the U.S. were all capable of doing cataract surgery," says Dr. Luo. "After three years, every student can be a good general ophthalmologist," Dr. Yan Wang adds. According to Dr. Chen, their residents complete a "very small amount of operations as primary surgeon" compared to HMS Ophthalmology residents. Dr. Chen maintains that this is not enough to build confidence in surgical skills, and pledges to incorporate more surgical cases into their current training program. "I hope we can take what we observed from Mass. Eye and Ear and incorporate aspects into our own training system," says Dr. Luo.

### Training Opportunities for HMS Ophthalmology Residents at Eye and ENT Hospital

In July 2011, third-year resident Nancy Huynh, MD, became the first clinical ophthalmology resident in the United States to do a formal rotation through Eye and ENT Hospital. Dr. Huynh not only participated in clinics, surgeries, and conferences (and gave a Grand Rounds presentation)—thus expanding her ophthalmology training—but also engaged in discussions on how to formalize and improve the Eye and ENT residency program. This educational exchange presents HMS Ophthalmology residents with a unique opportunity to train in an overseas setting, and to further the educational exchange between the two institutions.

### Advanced Surgical Training Courses in Shanghai

In March 2012, Roberto Pineda II, MD, and Sherleen Chen, MD, traveled to Fudan University to teach the China Alcon Advanced Cataract Course, which was the first of its kind in China. The course is modeled on the HMS Intensive Cataract Surgical Training Course, the premier cataract training program for residents in the U.S., developed by Dr. Bonnie Henderson in 2005, and co-directed by Drs. Henderson, Pineda and Chen. Drs. Pineda and Chen delivered lectures on phacoemulsification and residency training, and despite their tight schedule, they enjoyed their stay immensely. According to Dr. Pineda, this joint course "was a huge success," and he commended Drs. Lu Yi and Luo Yi for their graciousness and hospitality. "I am sure you

will be hearing positive things from the institution,” says Dr. Pineda. “I anticipate a similar program will be planned for next year.”

### Plans for Increasing Communication and Opportunities for Collaboration

Shanghai faculty also provided us with valuable insight and constructive feedback. Cornea specialist Dr. Yan Wang, who participated in the spring 2011 exchange, commended the recent union between Mass. Eye and Ear with Schepens Eye Research Institute, and shared his observation that further efforts to strengthen communication between our two affiliates would benefit overall research efforts at HMS.

Dr. Junyi Chen, a glaucoma specialist from Eye and ENT Hospital, raised many “hot points” of potential research collaboration following the spring 2012 exchange. “The disease spectrum is different in Chinese and Caucasian patients,” says Dr. Chen. For example, while pseudoexfoliative glaucoma is a common form of glaucoma in the United States, it is very rare in China. On the other hand, Posner-Schlossman syndrome is rare in the U.S. but “much more common in China.” These differences present several opportunities to collect samples from both U.S. and Chinese patients, and conduct basic scientific studies to elucidate the discrepancy of disease prevalence in the two countries. Dr. Luo also pointed out the need for more multicenter clinical studies in China, as well as many common interests in the basic science of glaucoma. “All of these are potential points of cooperation,” says Dr. Chen.

In April 2012, Dong Feng Chen, MD, PhD, of Schepens Eye Research Institute, and recently named chair of Women’s Eye Health.org, visited Eye and ENT Hospital to discuss various potential joint ventures to initiate eye health education programs through various media outlets. Dr. Chen is also leading the effort to nurture academic opportunities in Beijing as well. In ongoing conversations with Fudan and Beijing groups, Dr. Chen has discussed the potential to open joint clinical practices in China. “China now is a big open market that is full of possibilities,” she says. “Moreover, the infrastructure and medical insurance are in place now to support such an effort.”

The expanding academic partnerships with Chinese institutions has proven mutually and synergistically beneficial, and faculty members from both institutions look forward to a continuing and productive relationship. Several future exchanges have been planned; for example, a group from the Mass. Eye and Ear Cornea Service, as well as additional faculty members in different areas, will visit Eye and ENT Hospital in the fall. “We hope the corneal specialists will find common interests to collaborate after they get to know each other better,” says Dr. Ling Chen. Of the exchange program overall, Dr. Luo is also enthusiastic. “I hope we can continue an ongoing dialog and collaboration among our hospitals.” ■

## A Collaborative Timeline

- **April 2010:** Xinghuai Sun, MD, PhD, President of Eye and ENT Hospital, Fudan University, and Associate Professor at Fudan, Ling Chen, MD, PhD, (former HMS research fellow of Joan W. Miller, MD) met with Ivana Kim, MD, and Dr. Miller at Mass. Eye and Ear to explore potential opportunities for collaboration between the two institutions.
- **December 2010:** HMS ophthalmology faculty members traveled to China for five days and exchanged information with Eye and ENT Hospital faculty about the academic, clinical, and research efforts of their respective institutions.  
*Faculty: Joan Miller, MD, FARVO; John Loewenstein, MD; Evangelos Gragoudas, MD; Janey Wiggs, MD, PhD; Ivana Kim, MD*
- **February 2011:** Faculty from Mass. Eye and Ear, Boston Children’s Hospital, and Eye and ENT Hospital participated in a Grand Rounds Teleconference.
- **May through June 2011:** HMS welcomed five members of the Eye and ENT Hospital faculty. Our residency program was the primary focus of this exchange.  
*Faculty: Yi Luo, MD, PhD; Yanqiong Zhang, MD, PhD; Ling Chen, MD, PhD (former HMS retina research fellow); Junyi Chen, MD, PhD, Yan Wang, MD, PhD*
- **July 2011:** Third-year resident Nancy Huynh, MD, became the first ophthalmology resident in the U.S. to rotate through Eye and ENT Hospital.
- **March 2012:** Roberto Pineda II, MD, and Sherleen Chen, MD, traveled to Eye and ENT Hospital to conduct the China Alcon Advanced Cataract Course.
- **April 2012:** Schepens faculty member Dong Feng Chen, MD, PhD, visited Eye and ENT Hospital to discuss joint healthcare partnerships.
- **June 2012:** Seven cornea faculty members from Eye and ENT Hospital will attend the HMS Department of Ophthalmology Annual Meeting & Alumni Reunion Weekend, and participate in other seminars and meetings.  
*Faculty: Xinghuai Sun, MD, PhD; Yi Lu, MD, PhD; Wenji Wang, MD, PhD; Yuhong Chen, MD, PhD; Jinhui Dai, MD, PhD; Associate Professor Ling Chen, MD, PhD.*
- **October 2012:** A group from the Mass. Eye and Ear Cornea Service, as well as additional faculty members in different areas – including Drs. Leo Kim (Retina) and Louis Pasquale (Glaucoma) - will visit Eye and ENT Hospital in the fall.

## 2012 Resident Graduates



### Han-Ying Peggy Chang, MD

*Career Plans: Cornea Fellowship (Chief Cornea Fellow), Mass. Eye and Ear/HMS, Boston, MA*

Born in Taipei, Taiwan, Peggy moved to the U.S. at the age of three. In 2004, she entered Johns Hopkins School University of Medicine, graduating Alpha Omega Alpha. Her performance during medical school was honored with the 2006 William H. Welch Pathology Award, given annually to recognize the student with the most outstanding record in that discipline.

Throughout her residency, preceptors have noted Peggy's strong work ethic and exceptional analytical talents, which she has applied to numerous clinical projects. Along with Dr. Sheila Borboli-Gerogiannis at Mass. Eye and Ear, Peggy examined the prevalence, microbial profile, and risk factors for ocular involvement among inpatients with systemic candidemia at Brigham and Women's Hospital. This work was presented at the 2011 ARVO meeting, the 2011 Women-in-Ophthalmology Symposium, and is currently in preparation to be submitted for publication. Peggy also worked with Dr. Sheila Borboli-Gerogiannis to conduct a review of ophthalmic diagnoses in inpatient consults; these findings were also presented at the 2011 ARVO meeting and are also in preparation to submit for publication. Working with Dr. Kathryn Colby, Peggy submitted a case report in September 2011 to the journal, *Cornea*, on ischemia secondary to injection of poly-L-lactic acid into the temporal fossa. Peggy also worked closely with Dr. James Chodosh to outline diagnostic and therapeutic considerations in fungal keratitis. Their manuscript was published in the journal *International Ophthalmology Clinics* in the fall 2011 issue.



### Miriam Englander, MD

*Career Plans: Vitreoretinal Fellowship Cole Eye Institute, Cleveland Clinic, Cleveland OH*

Born and raised in Israel, Miriam moved to the U.S. in 1998. She attended the Stanford University School of Medicine. She was the recipient of the prestigious Jonas E. Salk Scholarship for academic achievement and research, and the Solomon J. Toubin Memorial Scholarship for academic achievement, two years in a row.

During residency, Miriam was involved in many projects. She published an extensive review on the advances in detection and treatment of Toxoplasmosis. She authored a chapter on Optical Coherence Tomography imaging for the new edition of the Yanoff & Ducker Ophthalmology book. She presented a 10-year review of patients with open globe injuries who presented to Mass. Eye and Ear to assess the clinical features and outcomes of retinal detachment following these repairs. In addition, working with Drs. Teresa Chen, Ivana Kim and Joan Miller, Miriam conducted a six-year retrospective analysis of intravitreal injections performed at the hospital reporting the incidence of post injection endophthalmitis. Most recently she worked with Dr. Demetrios Vavvas, on describing the fundus auto-fluorescence features and outcomes after retinal detachment repair. Faculty have described Miriam as having great potential to make significant contributions to her chosen field of vitreoretinal medicine.

### Meenakashi Gupta, MD

*Career Plans: Vitreoretinal Diseases and Surgery Fellowship, New York Eye and Ear Infirmary, New York, NY*

Meenakashi recognized early on that she had a passion for science, medicine, education, public health, and especially, ophthalmology. Following her third year of medical school training at HMS, Meenakashi took an extra year of study to conduct glaucoma research with Dr. Douglas Rhee at Mass. Eye and Ear. She investigated the role of SPARC in intraocular pressure regulation in trabecular meshwork and uveal scleral tract. This resulted in a publication in the journal *Investigative Ophthalmology and Visual Science* in 2009, and she was awarded a Fight for Sight Student Fellowship.

Preceptors have noted that Meenakashi is an outstanding clinician scientist who is unfailingly thorough and professional in every aspect of her work. During residency, Meenakashi initiated the creation of a wet lab manual for ophthalmology residents. Working closely with Dr. Carolyn Kloek, she helped create a multi-media guide of wet lab protocols. Under the guidance of Drs. Lloyd P. Aiello and Jennifer Sun at the Joslin Diabetes Center, Meenakashi initiated the first clinical study to investigate the relationship of childhood obesity and diabetic retinopathy. For this work, she received a travel award to present her findings at the 2011 ARVO annual meeting. The results of this study are in preparation for publication.

### Nancy Huynh, MD

*Career Plans: Ophthalmic Genetics Fellowship, Ophthalmic Genetics & Clinical Epidemiology, National Eye Institute*

Born in Los Angeles to refugee parents, Nancy overcame numerous obstacles to excel remarkably in every facet of her personal, academic, and professional pursuits. During her undergraduate years she conducted public health research in Ghana and Vietnam where she became keenly aware of the significance of congenital eye disorders and gene-environment interactions that may impact eye health. These early experiences built the foundation for Nancy's future commitment to understanding and treating genetic eye diseases. She followed this interest as a medical student, working at Mass. Eye and Ear with Drs. Margaret DeAngelis, Ivana Kim and Joan Miller in AMD genetics research.

As a resident, Nancy collaborated with Dr. C. Stephen Foster of the Massachusetts Eye Research and Surgery Institution; she found that biological response modifiers may be useful as adjunctive therapy to certain types of ocular inflammatory diseases. More recently, Nancy studied therapeutic interventions for ocular viral infections with Dr. Lucy Young. In July, 2011, Nancy became the first clinical ophthalmology resident in the U.S. to do a formal rotation through the Eye and ENT Hospital of Fudan University, where she participated in lectures, clinics, and Grand Rounds. Preceptors speak highly of her talents, noting that Nancy is "uniquely adept in all aspects of healthcare...from discovery in the laboratory to deployment at the global health level."





**Yao Liu, MD**

*Career Plans: Glaucoma Fellowship, University of California Davis, Sacramento, CA*

Yao received her MD from the Harvard Medical School/Massachusetts Institute of Technology Division of Health Sciences and Technology (HST) program. During residency she tackled an ambitious research schedule and participated in four separate investigations. Under the mentorship of Dr. Louis Pasquale, Yao studied

the impact of a diabetes teleretinal imaging program in an urban Hispanic population; she presented these findings at the 2010 ARVO annual meeting. Yao also conducted an advanced glaucomatous optic neuropathy outcomes study in patients with primary open angle glaucoma. A third project, in collaboration with Dr. Ankoor Shah, was a knowledge and compliance study in patients with traumatic eye injuries. She also worked with Dr. Teresa Chen to investigate the effect of partial posterior vitreous detachment using OCT; she presented this research at the ARVO annual meeting in 2011 and is preparing the data for publication.

As a testament to her success in her residency training, Yao was invited to attend the 2011 Heed Residents Retreat. She also presented a complicated case presentation at the 2011 Women in Ophthalmology meeting, and had a poster presentation at the 2012 ARVO annual meeting. Recently she received the ASCRS Resident Excellence Award. Dr. Liu's preceptors have unanimously commended her diligence and intellect, and describe her talent's as "excellent and outstanding."



**Andrew Schneier, MD**

*Career Plans: Pediatric Ophthalmology Fellowship, Boston Children's Hospital and Mass. Eye and Ear/HMS, Boston, MA*

Following a two-year foray in information technology as an editor and technical writer, Andrew rekindled a long-time fascination in the medical sciences, and he decided to pursue a career in medicine. He graduated *cum laude* from Ohio State University College of Medicine in 2008.

Noted to be an "intelligent, hard-working and determined" by his residency preceptors, Andrew worked with Drs. Gena Heidary and Danielle M. Ledoux, of Boston Children's Hospital to study optic nerve appearance in Down syndrome patients; this work was presented at the annual ARVO meeting in May 2011. Together with Dr. Marlene Durand, an infectious disease specialist at Mass. Eye and Ear, he reviewed advances in diagnosis and treatment of toxocariasis; this work is currently in press in the journal *International Ophthalmology Clinics*. Andrew has also worked with Dr. Matthew Gardiner, Director of Mass. Eye and Ear's Emergency Department services, and described the case of a 31-year old man with toxoplasmosis chorioretinitis and acute hydrocephalus. This case report is in press in the *Digital Journal of Ophthalmology*.

**Peter Veldman, MD**

*Career Plans: Chief Resident & Director of Ocular Trauma Service, 2012-13, Mass. Eye and Ear/HMS, Boston, MA*

Peter received his MD from the Perelman School of Medicine at the University of Pennsylvania where he was elected to Alpha Omega Alpha. During medical school he received the Jeffrey Berger research award and the Charles Oliver award, which recognizes the highest academic performance for those pursuing training in Ophthalmology.

As a resident, Peter served on the Graduate Medical Education Committee at Mass. Eye and Ear and he actively contributed to a number of important research publications. In 2011, along with Dr. Kathryn Colby, he published, "Current Evidence for Topical Azithromycin 1% Ophthalmic Solution in the Treatment of Blepharitis and Blepharitis Associated Ocular Dryness," in *International Ophthalmology Clinics*. In collaboration with Dr. Roberto Pineda II and co-authors, Peter has a manuscript currently in-press, entitled, "Cosmetic iris implants: two cases of explanation secondary to uveitis, glaucoma and corneal decompensation." Additionally, he was contributing author on a paper published in *Investigational Ophthalmology and Visual Science* in 2011 and in the journal, *Brain Research* in 2009. A poster of this research work was presented at the 2010 annual ARVO meeting, as well as the ARVO-Imaging Conference in 2011. Preceptors have noted Peter's excellent clinical and surgical judgment; we look forward to his leadership as Chief Resident and Director of the Eye Trauma Service in the coming year.



**Glenn Chung-Wing Yiu, MD, PhD**

*Career Plans: Vitreoretinal Diseases and Surgery, Duke Eye Center, Durham, NC*

Glenn was born in Hong Kong, and immigrated with his family to New York at the age of eight. He received his MD/PhD from HMS. His research focused on nervous system regeneration and neuroprotection and resulted in an impressive number of primary research and review articles.

As a resident, Glenn worked with Dr. Jorge Arroyo at Beth Israel Deaconess Medical Center to assess surgical outcomes of epiretinal membrane surgery and, at Mass. Eye and Ear, studied the use of B-scan ultrasonography in open globe surgery with Dr. Christopher Andreoli. Under the mentorship of Dr. Dong Feng Chen at Schepens Eye Research Institute, he studied epigenetic mechanisms of neurodegenerative retinal diseases with the goal of identifying novel therapeutic strategies for retinal disease. He gives a didactic overview of this emerging field of study in a chapter he co-authored for *Retina*, 5th Edition, slated for publication in 2012. Glenn also worked closely with Drs. John Loewenstein and Bonnie Henderson to create educational software for Mass. Eye and Ear's recently launched Cataract Master™. During residency, preceptors commended Glenn's strong work ethic and professionalism. He is the recipient of a Heed Ophthalmic Fellowship.



*continues on page 10*

## Chief Resident



### Justin Kanoff, MD

*Career Plans: Vitreoretinal Fellowship, Mass. Eye and Ear/HMS, Boston, MA*

Justin attended the University of Texas Southwestern Medical School. As a resident, Justin was the lead author on several scholarly reports. He conducted a retrospective review of the trauma database at Mass. Eye and Ear, and compared work-related open-globe injuries to non-work-related injuries. He presented

this work at ARVO, and later published his findings in the *American Journal of Ophthalmology*. Working with Frederick Jakobiec, MD, DSc and Kathryn Colby, MD, PhD, Justin described a rare corneal-scleral lesion in a 15-year-old patient. The paper was published June 2010 in the journal *Cornea*. In collaboration with Lucia Sobrin, MD, MPH, he wrote his resident's course paper on acute retinal necrosis, and his manuscript was published in the Fall 2011 issue of *International Ophthalmology Clinics*.

Justin earned high praise from his preceptors who describe him as a "highly talented" and "extremely bright" resident who well exceeded expectations as Chief Resident. Preceptors noted his compassionate care of patients and careful oversight of Mass. Eye and Ear's Eye Trauma Service. Justin also proved to be a diligent didactic and surgical teacher and a source of leadership to junior residents. "Justin is fully committed to teaching," noted resident, Alice Lorch, MD. "As

a junior class we met with him every morning all year and he - always patiently- taught and re-taught us the basics of Ophthalmology. We will always owe him our foundations!"

## Optometry Resident

### Mark Bernardo, OD

*Career Plans: Full-time Optometrist, Mass. Eye and Ear/HMS, Boston, MA*

Mark was born in Manila, Philippines, and moved to New Jersey at the age of 12. He graduated in 2011 from the New England College of Optometry (NECO), where he was inducted as a member of the Beta Sigma Kappa Honor Society, and awarded the Beider Moral Obligation scholarship. Mark is the second optometrist to complete the department's one-year post-doctoral residency program, which emphasizes ocular disease management and specialty contact lens fitting. During residency, Mark gained a broad range of pre- and post-operative clinical and surgical co-management experience rotating through the subspecialties of contact lens, refractive services, uveitis, oculoplastics, neuro-ophthalmology, low vision, and the emergency room. Mark is joining the full-time optometry staff after graduation and will practice primarily at Mass. Eye and Ear's Multi-Specialty Ambulatory Care Center in the Longwood/Mission Hill area.



## 2012 Fellow Graduates

### Cornea

**Houman Hemmati, MD, PhD**  
Career Plans: Full-Time Academics, University of Vermont Medical School, Berlin, VT

**Sahar Kohanim, MD**  
Career Plans: Full-Time Academics, Beth Israel Deaconess Medical Center/HMS, Boston, MA

**Zhonghui Katie Luo, MD, PhD**  
Career Plans: Full-Time Academics, Mass. Eye and Ear/HMS, Boston, MA

**Christina Prescott, MD, PhD**  
Career Plans: Full-Time Academics, Wilmer Eye Institute Johns Hopkins University, Baltimore, MD

### Glaucoma

**Benjamin Kronberg, MD**  
Career Plans: Full-Time Academics, VA Loma Linda Healthcare System, Loma Linda, CA

**Jessica Wong, MD**  
Career Plans: Private Practice, Los Angeles, CA

### Neuro-Ophthalmology

**Joshua Kruger, MD, PhD**  
Career Plans: Fellowship, Adult-Strabismus, Mass. Eye and Ear/HMS, Boston, MA

**Cristiano Oliveira, MD**  
Career Plans: Full-time academics, Cornell University, New York, NY

### Ocular Immunology/Uveitis

**Khayyam Durrani, MD**  
Career Plans: Fellowship, Cornea and External Disease, Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD

**Rebecca Hunter, MD**  
Career Plans: Plans unspecified

### Ophthalmologic Pathology

**Lynn J.P. Perry, MD, PhD**  
Career Plans: Plans unspecified

### Ophthalmic Plastic and Reconstructive Surgery

**Daniel Lefebvre, MD**  
Career Plans: Full Time Academics, Mass. Eye and Ear/HMS, Boston, MA

### Pediatric Ophthalmology

**Miriam Ehrenberg, MD**  
Career Plans: Fellowship, Pediatric Medical Retina, Boston Children's Hospital/HMS

**Lani To Hoang, MD**  
Career Plans: Plans unspecified

**Lan Chang, MD**  
Career Plans: Private Practice, Eye Associates of New Mexico, NM

### Retina

**Grace Chang, MD, PhD**  
Career Plans: Plans unspecified

**Abumere Akinwale, MD**  
Career Plans: Private practice, Southern Eye Center, Hattiesburg, MI

**Jason Comander, MD, PhD**  
Career Plans: Full-Time Academics, Mass. Eye and Ear/HMS, Boston, MA

**Lynn Huang, MD, MPH**  
Career Plans: Private Practice, Win Retina, Arcadia, CA

**Yevgeniy (Eugene) Shildkrot, MD**  
Career Plans: Full-Time Academics, University of Virginia, Charlottesville, VA

**Ahmed Soliman, MD**  
Career Plans: Fellowship, Pediatric Ophthalmology, University of Minnesota Medical School, Minneapolis, MN

**Jerald Wisdom, MD**  
Career Plans: Chief of Medical Retina, Kaiser Permanente, San Jose, CA

### Research Fellows

**Fabiano Cade Jorge, MD**

**Minnan Xu, PhD**

**Dimosthenis Mantopoulos, MD**

**Michelle Lee White, MD**

**Sepideh Faez, MD**

**Mi In Roh, MD**

**Yu-Chieh Ko, MD**

**Mamta Shah**

This year's **Evangelos S. Gragoudas Prize** for outstanding research publications by research trainees has been awarded in two categories: The best Basic and Translational research publication goes to: **Aristomenis Thanos, MD** for his paper, "Evidence for Baseline Retinal Pigment Epithelium Pathology in the Trp 1-Cre Mouse," (*Am. J Pathol*, May 2012). The best Clinical research publication goes to: **Anthony B. Daniels, MD, MSc**, for his paper "Genotype-Phenotype Correlations in Bardet-Biedl Syndrome," (*Arch Ophthalmol*. March 2012).

# Alice M. McPherson, MD, Receives the 2012 HMS Distinguished Alumni Professional Achievement Award

**D**r. Alice McPherson is an accomplished educator, scholar, leader, and pioneer dedicated to the study and treatment of retinal disease. Dr. McPherson received her medical degree from the University of Wisconsin School of Medicine and completed a retina fellowship under Dr. Charles Schepens at Mass. Eye and Ear in 1957, becoming the first woman retinal surgeon in the United States. She is a Professor of Ophthalmology at Baylor College of Medicine, specializing in vitreoretinal diseases, surgery and macular degeneration.

Dr. McPherson's scientific contributions to ophthalmology began with pioneering scleral buckling procedures, cryotherapy, and zenon and laser therapy in the management and treatment of 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 led to a large double-masked National Institute of Health Diabetic Retinopathy Study, which established the value of laser therapy in the treatment of diabetic retinopathy. In the late seventies, she started treatment of infants with retinopathy of prematurity (ROP) using cryo and buckling. This led to a double-masked study that established early therapies for progressive ROP.

A named lectureship was started in her honor in 1994 at the University of Wisconsin and, in 1997, they presented her with a baccalaureate Doctor of Science. In 2000, a \$10 million endowment was established to support the Eye Research Institute at the University of Wisconsin-Madison Medical School. In 1969, Dr. McPherson 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 provided over \$25 million to support retina research. The Foundation has an endowment fund of over \$40 million to help continue research grants, international fellowships, research initiatives, lectureships, and support twelve established retina research awards. Additionally, the RRF has funded three Professorships and five retina Chairs: four at the University of Wisconsin Medical School and one at Baylor College of Medicine.

Dr. McPherson's extraordinary dedication and leadership have benefited many professional organizations. She has served as founding President of the University of Wisconsin Ophthalmology Alumni Association, president of the Houston Ophthalmological Society, second vice president of the American Academy of Ophthalmology (AAO), vice-regent in Texas for the International Council of Surgeons, trustee and vice-chair of Program Development for the Foundation of the American Academy of Ophthalmology, and member of the Planned Giving Committee of the Academy. She is presently active on the Board of Retina Research Foundation, Pan American Association of Ophthalmology Foundation, Schepens International Society Foundation, University of Wisconsin Foundation and the International Council of Ophthalmology Foundation. Dr. McPherson has received numerous national and international awards. ■



---

## Mariana D. Mead Lecturer: Joan M. O'Brien, MD



**J**oan M. O'Brien, MD, received her medical degree from Dartmouth Medical School. She completed an internship in internal medicine at Beth Israel Hospital in Boston, followed by research fellowships in immunology at Harvard Medical School and in ophthalmic pathology at Massachusetts Eye and Ear Infirmary. Dr. O'Brien subsequently completed a residency in ophthalmology at Mass. Eye and Ear

(class of '92) and a fellowship in ocular oncology at the University of California at San Francisco (UCSF).

Dr. O'Brien joined the UCSF faculty in 1992 where she led a distinguished career, rising to the rank of Professor and serving as Vice Chair of Ophthalmology and Director of the Ocular Oncology Division. She was recently appointed Chair of the Department of Ophthalmology and Director of the Scheie Eye Institute at the University of Pennsylvania School of Medicine. She assumed her new role January 1, 2010.

Dr. O'Brien specializes in the treatment of ocular tumors, including retinoblastoma, ocular melanoma, conjunctival

malignancies, ocular metastases, and ocular and CNS lymphoma. Her research interests include development of targeted therapies and genetic screens for retinoblastoma. She is also involved in the study of genetic pathways common to both cutaneous and ocular melanoma. Dr. O'Brien's laboratory is currently supported by the National Eye Institute to provide cost-free genetic screening to retinoblastoma patients nationally. She also receives National Cancer Institute support for her studies of ocular melanoma.

Widely published in her field, Dr. O'Brien's work has recently appeared in *Nature* and *Clinical Cancer Research*. She has received numerous honors, including a Young Investigator Award and a Physician-Scientist Award from Research to Prevent Blindness, a Career Development Award from the American Association for Cancer Research, and an Honor Award and a Senior Achievement Award from the American Academy of Ophthalmology. Dr. O'Brien also has a long history of awards from both the National Cancer Institute for clinical trials and the National Eye Institute for basic science investigations. ■

Following are press release excerpts highlighting several recent research breakthroughs and/or ongoing research investigations in the HMS Department of Ophthalmology. To read the full text and for links to our investigators in the news, visit [www.MassEyeAndEar.org/news](http://www.MassEyeAndEar.org/news).

## Study Identifies Important New Pathways in Glaucoma Development

Results from the largest genetic study of glaucoma showed that two genetic variations are associated with primary open angle glaucoma (POAG), a common form of the disease. The identification of genes responsible for this disease is the first step toward the development of gene-based disease detection and treatment. Researchers including lead author **Janey Wiggs, MD, PhD**, (Principal Investigator) and **Louis Pasquale, MD**, co-directors of the HMS Glaucoma Center of Excellence, analyzed DNA sequences of 6,633 participants, half of whom have POAG. The results were reported online April 26 in *PLoS Genetics*. The study showed that two genetic variations are associated with primary open angle glaucoma, including normal pressure glaucoma (NPG). These are the first variants commonly associated with NPG. "This research has provided important new insights into the disease pathogenesis and will make future studies focused on translating this information into the clinic possible," said Dr. Wiggs.

## BGI, George Mason University, Mass. Eye and Ear, and the University of Oklahoma Health Scientists Center Announce Agreement to Sequence 100 Human Adenoviruses

**Mass. Eye and Ear researchers** have joined a team from BGI, the world's largest genomics organization, in conjunction with George Mason University and the University of Oklahoma Health Sciences Center in an agreement to sequence 100 human adenoviruses (HAdVs) gathered from researchers globally, including ones that cause respiratory, gastrointestinal, and ocular diseases. The goal of the project is to identify the molecular basis of adenovirus evolution, including base changes and genome recombinations, and to understand the genome basis for adenovirus pathogenicity and its role in the genesis of emergent pathogens. Genome recombination plays an important role in the molecular evolution of HAdVs, leading to newly emerging strains as well re-emerging pathogens that have changed or become more virulent. Extensive genome sequence data from both newly isolated and archived HAdVs, and their accompanying bioinformatics, are leading to an in-depth understanding of the biology of HAdVs, including how novel viral pathogens appear. Whole genome sequencing will elucidate how these viruses change over time, and enable researchers to identify emerging pathogens and develop effective treatments.

## Harvard Team Cracks the Code for New Drug-Resistant Superbugs

Scientists from the National Institutes of Health (NIH)-funded Harvard-wide Antibiotic Resistance Program, headquartered at Mass. Eye and Ear, have determined the genetic sequences of all 12 available strains of *Staphylococcus aureus* bacteria resistant to vancomycin—an antibiotic of last resort—and have demonstrated that resistance arose independently in each strain after it acquired a specific bit of genetic material called transposon Tn1546. The transposon likely came from vancomycin-resistant *Enterococcus* bacteria that simultaneously infected patients in at least 12 documented cases in New York, Michigan, Pennsylvania and Delaware. The team also identified shared features among the vancomycin-resistant staph strains that may have helped them acquire Tn1546 and evade human immune defenses. Their findings are reported in the May 22 issue of the journal *mBio*<sup>®</sup>. Headed by **Michael Gilmore, PhD**, the Sir William Osler Professor of Ophthalmology at Harvard Medical School, the group works closely with partners at the Broad Institute and Harvard's Microbial Sciences Initiative. "The genome sequence gave us unprecedented insight into what makes these highly resistant bacteria's tick," said Dr. Gilmore. The group is using this information to develop new ways to prevent and treat infection caused by these bacteria.

## Mass. Eye and Ear Participating in Stem Cell Trial for Dry AMD

Mass. Eye and Ear will serve as a clinical trial site for Advanced Cell Technology, Inc. (ACT) to participate in its Phase I/II clinical trial for dry age-related macular degeneration using human embryonic stem cell (hESC)-derived retinal pigment epithelial (RPE) cells. **Dean Elliott, MD**, Associate Director of the Retina Service at Mass. Eye and Ear will head up the investigation. In May, Mass. Eye and Ear received institutional review board approval to be a study site for the trial. The trial is a prospective, open-label study designed to determine the safety and tolerability of the hESC-derived RPE cells following sub-retinal transplantation into patients with dry AMD. The trial ultimately will enroll 12 patients, with cohorts of three patients each in an ascending dosage format. "Dry AMD represents one of the largest unmet medical needs in ophthalmology," commented Dr. Elliott. "We appreciate the opportunity to get some first-hand experience with the protocol and be involved with the international team that has been assembled around the U.S. and European trials."



## Repeat Gene Therapy Proved Safe and Resulted in Improved Vision in Small Study

A study published in February 8 issue of *Science Translational Medicine* has demonstrated the safety and efficacy of administering therapeutic genes to target cells to the second eye of a group of patients with the RPE genetic form of Leber congenital amaurosis. This follow-up gene therapy trial - led by a group of researchers at the University of Pennsylvania Scheie Eye Institute, including **Eric Pierce, MD, PhD**, now Director of the Ocular Genomics Institute at Mass. Eye and Ear - treated the second eye of the original patient cohort by providing therapeutic genes to target cells. In the first clinical trial, administration of a gene therapy vector carrying the RPE65 gene to one eye in each of 12 patients with congenital blindness due to RPE65 mutations led to improvements in retinal and visual function and proved to be a safe and stable procedure (*New England Journal of Medicine*, 2008). This follow-up study, conducted by the same group of researchers, safely administered the vector and therapeutic transgene to the other eye of these patients. The researchers did not discover any safety concerns and did not identify immune responses to the vector or transgene product.

## Mass. Eye and Ear Researchers Among Authors of Study online in Nature Genetics

Two new studies have found that large structural abnormalities in chromosomes, some of which have been associated with increased risk of cancer, can be detected in a small fraction of people without a prior history of cancer. The studies found that these alterations in chromosomes appear to increase with age, particularly after the age of 50, and may be associated with an increased risk for cancer. These studies were conducted by two consortia, one led by scientists at the National Cancer Institute (NCI), and one by Gene Environment Association Studies (GENEVA) which is sponsored by the National Human Genome Research Institute (NHGRI). NCI and NHGRI are both parts of the National Institutes of Health. The results of the studies were published online May 6, 2012, in *Nature Genetics*. Drs. **Janey Wiggs** and **Louis Pasquale** contributed data to the GENEVA consortium study. "Accounting for these chromosomal abnormalities is routine in the search for new gene variants associated with complex diseases like primary open-angle glaucoma. This work illustrates that the highly collaborative efforts of researchers across disciplines can translate into important scientific observations that transcend the specific interests of individual research groups," said Dr. Louis Pasquale, a senior author on the GENEVA consortium publication and Director of the Glaucoma Service at Mass. Eye and Ear.

## FirstLight: Scientists Regenerate the Optic Nerve, Restore Some Components of Vision

Researchers have long tried to get the optic nerve to regenerate when injured, with some success, but no one has been able to demonstrate recovery of vision. A team at Boston Children's Hospital, led by **Larry Benowitz, PhD** (who holds a secondary appointment as Professor of Ophthalmology at HMS), and colleagues at the F.M. Kirby Neurobiology Center at Boston Children's Hospital reports a three-pronged intervention that not only got optic nerve fibers to grow the full length of the visual pathway (from retina to the visual areas of the brain), but also restored some basic elements of vision in live mice. The team demonstrated that mice with severe optic nerve damage can regain some depth perception, the ability to detect overall movement of the visual field, and perceive light, allowing them to synchronize their sleep/wake cycles. The study, published online by the *Proceedings of the National Academy of Sciences* during the week of May 21, is the first to show that these fibers can be made to grow long enough to go from eye to brain, that they are wrapped in the conducting "insulation" known as myelin, that they can navigate to the proper visual centers in the brain, and that they make connections (synapses) with other neurons, allowing visual circuits to re-form. "Dr. Benowitz and his group have, for the first time, established proof-of-concept that a damaged optic nerve can regenerate and attain lost function," says Nareej Agarwal, PhD, of the National Eye Institute, which supported the study. "This is an important advance in an effort to reverse vision loss in glaucoma and other neurodegenerative diseases." To read the full press release text, visit [www.childrenshospital.org/newsroom](http://www.childrenshospital.org/newsroom).



## Scientists Find Unexpected Relationships Between Growth Factors in Eyes of Patients with PVR

According to a study conducted by scientists at Schepens Eye Research Institute, VEGF (vascular endothelial growth factor), which is known to cause blood vessel growth, also seems to unexpectedly bind the receptor for another growth factor known as platelet-derived growth factor (PDGF), and prevent PDGF from binding. This discovery suggests that VEGF may contribute to the development of proliferative vitreoretinopathy, the most common serious side-effect of retinal re-attachment surgery. This finding, published in the May issue of *Molecular and Cellular Biology*, is significant for two reasons according to principal investigator, **Dr. Andrius Kazlauskas**. "First, because it may ultimately give us much-needed targets for drugs to prevent PVR,...And second, because this unusual relationship of growth factors might also be occurring in other disorders." ■



**Annual Mass. Eye and Ear Vitreoretinal Course for First-Year Retina Fellows**  
**July 20-21, 2012**  
 Mass. Eye and Ear

Course Directors: **Dean Elliott, MD, John Loewenstein, MD, and Demetrios Vavvas, MD, PhD**

Now in its 3rd year, this unique and comprehensive workshop for first-year vitreoretinal fellows covers the theory and practice of vitreoretinal surgery and prepares fellows for the OR experience of the clinical fellowship. Participants join a distinguished group of world-class faculty in lectures, panel discussions, wet labs, video, and "dry labs" outfitted with EyeSi virtual reality simulators. Emphasis on hands-on training and a low student-teacher ratio ensures a significant educational experience. Each year, this highly popular workshop fills to capacity so don't wait to register!

To register, visit [www.masseyeandear.org/VRcourse](http://www.masseyeandear.org/VRcourse)



**Biennial Neuro-Ophthalmology Fall Festival**  
**October 20-21, 2012**

Course Director: **Joseph F. Rizzo III, MD**

This unique workshop exemplifies the art of traditional, case-based diagnostic formulations to provide a comprehensive overview on the diagnosis and management of common or medically significant neuro-ophthalmic disorders. Course objectives include:

- Understanding the most important neuro-ophthalmic disorders
- Observe the deductive reasoning process by experienced clinicians for "unknown" neuro-ophthalmic cases
- An update on important neuro-ophthalmic topics
- Perspectives on the management of neuro-ophthalmic disorders

The course is open to ophthalmologists, optometrists, neurologists, and emergency room physicians. Continuing Medical Education credit is available. For more information and to register, please visit [www.cme.hms.harvard.edu/courses/fallfestival](http://www.cme.hms.harvard.edu/courses/fallfestival)

## Ophthalmology Grand Rounds

**Academic Year July 2012-June 2013**

Grand Rounds are held every Thursday from 8:00-9:00 AM in Meltzer Auditorium, 3rd floor, Mass. Eye and Ear, and simulcast to the Karp 11 conference room at Boston Children's Hospital. Continuing Medical Education credit is available. A monthly list is posted at [www.MassEyeAndEar.org](http://www.MassEyeAndEar.org).

### Invited Grand Rounds Speakers

**June 7, 2012:** Neuroscience Grand Rounds at MGH Ether Dome. Speaker: **Eric Pierce, MD, PhD**, Mass. Eye and Ear

### Cornea Rounds

Cornea Rounds are hosted by the HMS Cornea Center of Excellence the 4th Wednesday of every month. MEEI Sloane Room, 3rd floor.

## 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](http://www.MassEyeAndEar.org).

For a complete listing of Schepens events please visit [www.schepens.harvard.edu/events\\_seminars/index.php](http://www.schepens.harvard.edu/events_seminars/index.php)

### Schepens Distinguished Lecture Series

Schepens, Conference Room 2

**June 7, 2012: Jeffrey A. Bluestone, PhD**, University of California, San Francisco. Topic: Controlling Autoimmunity through Regulatory T Cells – Basic Research and Clinical Challenges

### Pediatric Ophthalmology Visiting Professor Lecture Series

Children's Hospital Boston (video link to Mass. Eye and Ear)

**July 25, 2012: Susana Marcos, PhD**, Instituto de Optica, Madrid, Spain

### 5th Military Vision Research Symposium

**September 18-20, 2012**

Starr Center, Schepens

Co-sponsors: U.S. Army Medical Research & Materiel Command's Telemedicine & Advanced Technology Research Center, and Schepens Eye Research Institute/ Mass. Eye and Ear.

See back cover for details.

### Second International Biennial Symposium on AMD

**September 21-22, 2012**

Starr Center, Schepens

Committee Co-Chairs: Patricia A. D'Amore, PhD, MBA; Ivana K. Kim, MD; and Joan W. Miller, MD

See back cover for details



Patricia D'Amore, PhD, MBA, FARVO

# Awards, Grants & Other Honors

HMS Associate Professor of Ophthalmology, **Teresa Chen, MD**, received a new Harvard Catalyst pilot grant award for her project, "Spectral Domain OCT 3D," in the amount of \$50,000.

The following faculty members were nominated for a 2011-2012 HMS A. Clifford Barger Excellence in Mentoring Award: **James Chodosh, MD, MPH; Lotfi Merabet, OD, PhD; Shizuo Mukai, MD; Alexandra Bowers, PhD; Ilene Gipson, PhD, FARVO; Magali Saint-Geniez, PhD.**

**Kip Connor, PhD**, HMS Assistant Professor of Ophthalmology was awarded an R01 grant award from NIH in the amount of \$402,500 to support his project, "Complement Mediated Neovascularization in Retinopathy."

**Dean Elliott, MD**, Associate Director of the Retina Service at Mass. Eye and Ear has received a \$905,203 clinical trial agreement award from Advanced Cell Technology, Inc. (ACT) to participate in its Phase I/II clinical trial for dry age-related macular degeneration using human embryonic stem cell (hESC)-derived retinal pigment epithelial (RPE) cells.

HMS Professor of Neurology and Ophthalmology, **Elizabeth Engle, MD**, has been named as the first incumbent of the new Neuro-Ophthalmology Research Chair at Boston Children's Hospital.

**Gena Heidary, MD, PhD**, Boston Children's Hospital, has received a 2012 Knights Templar Award in the amount of \$60,000 for the grant entitled, "Non Invasive Monitoring of Intracranial Pressure in Papilledema Patients."

**George King, MD**, HMS Professor of Medicine and Chief Scientific Officer at Joslin Diabetes Center, received an HMS Harold Amos Faculty Diversity Award. The Harold Amos Diversity Award recognizes HMS faculty who have made significant achievements in moving HMS toward being a more diverse and inclusive community.

At the Steven M. Podos Colloquium in early May, it was announced that **Richard Masland, PhD**, the David Glendenning Cogan Professor of Ophthalmology and Professor of Neurobiology at HMS and Director of the Howe Laboratories of Ophthalmology at Mass. Eye and Ear, has been named as a recipient of a 2012 Alcon Research Institute (ARI) award. Alcon funds a virtual institute that seeks outstanding contributors to ophthalmic research throughout the world and honors them through both in a symposium that elite members of the eye research community attend, as well as a monetary research grant. The awardees also become members (alumni) of ARI.

HMS Associate Professor of Ophthalmology, **Louis Pasquale, MD**, received a gift of \$100,000 from Mr. Paul Margolis for his project, "The Genetics of Retinal Vascular Dysregulation in Glaucoma." Mr. Margolis is a Founding Managing Partner at Longworth Venture Partners, a technology venture capital firm and the current Chairman of the Board of Big Brothers Big Sisters of Massachusetts Bay. Mr. Margolis and his mother, Sylvia, have a long-term interest in supporting glaucoma research.

Congratulations to **Tom Merrill, OD**, Manager, Mass. Eye and Ear Optical Services, for earning his Master in Ophthalmic Optics Certification from the American Board of Opticianry (ABO). This certification is a distinguishing achievement as there are fewer than 400 ABO Master Opticians in the United States.

Three researchers in the department have been awarded grants from the Mass. Eye and Ear Curing Kids Fund. The Caring Kids Fund was established in 2010 to help bring life-changing treatments to children and to accelerate cures and innovations through research at Mass. Eye and Ear. Congratulations to: **Eric Pierce, MD, PhD**, of the Ocular Genomics Institute/Berman-Gund Laboratory (Disease Gene Discovery for Leber Congenital Amaurosis); **Dong Feng Chen, MD, PhD**, of Schepens Eye Research Institute (Epigenetic

Regulation of Congenital Retinal Dystrophy); and **Bruce Ksander, PhD**, of Schepens Eye Research Institute (A New Treatment to Prevent the Development of Drug Resistant Cancer Stem Cells in Retinoblastoma).

**Douglas Rhee, MD**, HMS Associate Professor of Ophthalmology, received a new study agreement award in the amount of \$354,456 from Merck Sharp & Dohme Corporation for his project, "Effect of Ophthalmic Preservatives on Trabecular Meshwork Outflow Facility."

Mass. Eye and Ear ophthalmology clinical fellow, **Jessica Wong, MD**, has been named as the first Richard J. Simmons and Ruthanne B. Simmons Fellow in Glaucoma.

## Staff Updates

**Congratulations to the Following Staff on their HMS Appointments or Mass. Eye and Ear Promotions:**

**Jing Chen, PhD**, Boston Children's Hospital, Assistant Professor of Ophthalmology

**Ivana Kim, MD**, Mass. Eye and Ear, Associate Professor of Ophthalmology

**Roberto Pineda II, MD**, Mass Eye and Ear, Associate Professor of Ophthalmology

**Russell Woods, PhD**, Schepens Eye Research Institute, Assistant Professor of Ophthalmology



HMS faculty in attendance as guest lecturers were Jessica Paulus, ScD, Adjunct Assistant Professor of Epidemiology, Harvard School of Public Health (third from left), Lotfi Merabet, OD, PhD, Mass. Eye and Ear (back row center) and Felipe Fregni, MD, PhD, MPH, Director, Laboratory of Neuromodulation at Spaulding Rehabilitation Hospital (third from right).

**Lotfi Merabet, OD, PhD,** HMS Assistant Professor of Ophthalmology, recently traveled to Saudi Arabia to attend the international conference, “Clinical Research, from Appraisal to Synthesis of Evidence,” where he led a workshop at the King Abdul Aziz University on first-hand knowledge and practice of clinical research. Organized with cooperation from Harvard Medical School, the goal of the three-day international conference was to address ways to increase and advance clinical research in Saudi Arabia.

**Personnel Changes:**

**Mark Bernardo, DO,** will be joining the Mass. Eye and Ear Associates in July after his graduation as an Optometry Resident from Mass. Eye and Ear. The second optometrist residency graduate at Mass. Eye and Ear, Mark completed his optometry training at New England College of Optometry. During his MEEI residency, his training focused on Ocular Eye Disease and entailed rotations through a number of subspecialties including contact lens, cornea, refractive services, uveitis, oculoplastics, neuro-ophthalmology, low vision and emergency services. Dr. Bernardo will be based primarily at the at the Longwood Medical Ambulatory Care Center, which is scheduled to open in the fall.

**Zhonghui Katie Luo, MD, PhD,** will be joining Mass. Eye and Ear’s Comprehensive Ophthalmology Service in July after completing a Mass. Eye and Ear Cornea Fellowship. Dr. Luo completed her BS (Biochemistry) and MS (Molecular Biology) degrees in her native China. She attended the Albert Einstein College of Medicine MD-PhD program where she earned her PhD in Pathology & Cell Biology in 2001. She graduated from the

HMS Department of Ophthalmology Residency Training Program in the spring of 2011. Dr. Luo’s primary practice location will be at the Longwood Medical Ambulatory Care Center, which is scheduled for completion this fall.

**David Wu, MD, PhD** will be joining the Retina Service in September, 2012. Dr. Wu will be working closely with Dean Elliott, MD, Associate Director of Retina Service, and Connie Cepko, PhD, Professor of Genetics and Ophthalmology at Harvard Medical School. Currently completing his Vitreoretinal Surgery Fellowship at the Doheny Eye Institute, Keck School of Medicine, Dr. Wu received his MD with distinction and completed ophthalmology training at the University of Michigan Medical School, Kellogg Eye Center. While at Kellogg, he pursued a Medical Retina and Research Fellowship as a 2010 Heed Fellow. This summer he will be attending an intensive seven-week, Joint Program in Clinical Effectiveness offered through a partnership between Brigham and Women’s Hospital, Massachusetts General Hospital, Harvard Medical School and Harvard School of Public Health.

**Service**

In March, as part of a new clinical trial, **Kathryn Colby, MD, PhD,** HMS Associate Professor of Ophthalmology, performed the first “collagen cross-linking” procedure for keratoconus at Mass. Eye and Ear on a 15-year-old, local figure skater with Olympic dreams. Keratoconus causes the cornea to weaken and change shape over time, ultimately leading to blindness in some individuals. It is estimated that one in every 2,000 people have this disease. The “collagen cross-linking” procedure is available in Europe and Canada, but needs FDA-approval in the U.S. Both Mass. Eye and Ear physicians and the hospital are donating their time and resources to conduct the trial, which is free to participating patients.

Earlier this spring **Ula Jurkunas, MD,** HMS Assistant Professor of Ophthalmology, gave elementary school students a glimpse into the world of ophthalmology training — through a pig’s eye. Dr. Jurkunas participated as part of a mentoring program through Winchester Elementary School. She gave students an evening tour of Mass. Eye and Ear, including the wet lab.

HMS Ophthalmology Department Chief and Chair, **Joan W. Miller, MD, FARVO** was among 25 local women healthcare and business leaders invited to attend the Women's Executive Roundtable on Public Private Partnerships in Prevention in March with the U.S. Surgeon General, Dr. Regina Benjamin. The event focused on public-private partnerships in disease prevention.

## Mass. Eye and Ear Space Renovations

In early April, the Mass. Eye and Ear Glaucoma Service moved into its newly renovated space on the first floor of the infirmary. Patient comfort and capacity has been increased with expanded waiting room areas, new examination suites and a dedicated testing area complete with the state-of-the-art equipment.

## Alumni News

**Vadim Arshavsky, PhD**, of Duke Eye University was awarded the Proctor Medal from The Association for Research in Vision and Ophthalmology (ARVO). Dr. Arshavsky is a former faculty member in the Howe Laboratory of Mass. Eye and Ear. The award is presented annually to recognize outstanding research in the basic or clinical sciences as applied to ophthalmology.

**David Epstein, MD, MMM**, (HMS resident, class of 1975 and glaucoma fellow, 1976, and former director of the Glaucoma Service at Mass. Eye and Ear) was awarded ARVO's 2013 Weisenfeld Award. The award is presented annually to an individual in recognition of distinguished scholarly contributions to the clinical practice of ophthalmology. Dr. Epstein is currently Chair of Ophthalmology at Duke Eye Center.

**Holly Hindman, MD, HMS** class of 2003 received an ARVO/Alcon Early Career Clinician Scientist Research Award. Dr. Hindman is an Assistant Professor of Ophthalmology at the University of Rochester Medical Center.

**Quan Dong Nguyen, MD, MSc**, (resident, class of '97; Ocular Immunology and Uveitis Fellow, class of '98; and Research Fellow, Schepens, class of '01), recently received an ARVO Foundation/Pfizer Ophthalmics/Carl Camras Translational Research Award. This award recognizes excellence in research, scientific discoveries, concepts and technologies that have led to, or have the promise of leading to, clinical applications. Dr. Nguyen is now an Associate Professor of Ophthalmology at Wilmer Ophthalmological Institute, the Johns Hopkins University School of Medicine.

**Vasiliki Poulaki, MD, PhD** ((HMS retina research fellow, resident, and retina fellow, 2008), has received an ARVO/Alcon Early Career Clinician Scientist Research Award. Dr. Poulaki is an Associate Professor of Ophthalmology at Boston University and a retinal specialist at the Veterans Affairs Boston Healthcare System.

## Press Time

The April 20-26, 2012 issue of the Boston Business Journal ran a feature article on **Dr. Joseph Rizzo's**, "smart glasses" and newly incorporated company, Bionic Eye Technologies. For over two decades, Dr. Rizzo has partnered with engineer, **John Wyatt**, to create technology that would link a series of implanted sensors on the retina to a pair of glasses fitted with a tiny camera that transmits light to the implant, essentially mimicking sight. Their company, Bionic Eye Technologies is seeking venture capital investments to raise funding for preclinical regulatory work that may lead to a clinical trial of the device and ultimately the commercialization of "smart glasses." *photo by Bruce Peterson*



## In Other News

### HMS Digital Journal of Ophthalmology Goes Mainstream

The editors of the HMS Digital Journal of Ophthalmology (DJO) have announced that the Literature Selection Technical Review Committee of the National Library of Medicine has recommended that the DJO be included in MEDLINE/PubMed. The DJO has published high-quality reports and articles since 1995, and the editorial team is excited to be moving DJO content into the mainstream of ophthalmic literature. Visit [www.djo.harvard.edu](http://www.djo.harvard.edu) to read the latest publications and to submit your work. And look for the DJO in PubMed this fall!

- Original research
- Grand Rounds case reports
- Knowledge review
- Patient information
- 2,000 registered users from 100 countries

Congratulations to our DJO editorial staff: **Carolyn Kloek, MD**, Editor in Chief; **Lynn Poole-Perry, MD, PhD**, Associate Editor; **Aaron Savar, MD**, Associate Editor; **Ankoor Shah, MD, PhD**, Associate Editor; and **Thomas Kozachek, PhD**, Managing Editor.

## Announcing New Distinguished Achievements Awards



Effective July 1, 2012 the Harvard Medical School Department of Ophthalmology will take submissions for two new awards.\*

- **The Distinguished Clinical Achievement Award of the Harvard Medical School Department of Ophthalmology** recognizes the lifetime achievements in eye and vision clinical care of Department alumni/ae and/or faculty.
- **The Distinguished Research Achievement Award of the Harvard Medical School Department of Ophthalmology** recognizes the lifetime achievements in eye and vision research of Department alumni/ae and/or faculty.

Email submissions to: [achievementaward@meei.harvard.edu](mailto:achievementaward@meei.harvard.edu). **The due date for the 2013 awards is September 1, 2012.** Please indicate in your submission the nominee name, clinical or research award, and a brief paragraph justifying the nomination.

Awards will be presented at the Annual Meeting & Alumni Reunion weekend, June 21-23, 2013.

*\* The two new awards—presented annually—will replace the SERI Distinguished Alumni Award and the Harvard Medical School Ophthalmology Distinguished Alumni Professional Achievement Award.*



## In Memoriam

**Barry Harvey Jacobs, MD**, a former Mass. Eye and Ear physician from 1978-1999, and a Clinical Instructor in Ophthalmology at HMS, passed away in May 2012 at the age of 71. Dr. Jacobs managed his own practice and additionally worked with the Harvard Community Health Plan, and the New Hampshire Eye Associates. Dr. Jacobs graduated from Columbia University and received his MD from SUNY Downstate Medical Center. In 2007, he and his wife, Barbara, moved to Texas to be near their daughter and grandchildren. In addition to spending time with family Dr. Jacobs enjoyed woodworking, traveling, exploring the outdoors and sharing he jokes. Before relocating to Texas, Dr. Jacobs was active in the New England Ship Craft Guild and a longtime member of the Grace Episcopal Church in Newton, MA.

## Mass. Eye and Ear Retina Consultants Opens in Stoneham

Following acquisition of a large retina practice in Stoneham, Mass. Eye and Ear opened the new satellite office, Retina Consultants, in January 2012 at 3 Woodland Road. The new practice offers subspecialty medical and surgical care for macular degeneration, diabetic eye and all conditions associated with the retina. HMS Chair, Joan Miller, MD, notes the new practice "is a great opportunity to expand our reach in a suburban area and make our services more accessible to patients. We look forward to bringing excellent retinal care to patients in the Stoneham and surrounding communities." The service is directed by Dan Esmaili, MD, with participation from several Mass. Eye and Ear retinal physicians, including: Dean Elliott, MD; Leo Kim, MD, PhD; Joan W. Miller, MD, FARVO; and Lucy Young, MD, PhD.

## A Fitting Tribute

May 22, 2012 marked the 50th year anniversary of the inauguration of the Schepens Eye Research Institute building and its library. The day was made memorable with the return of a sculpture of Schepens' founder, Charles L. Schepens, MD. The sculpture was commissioned in 1990 by HMS Ophthalmology alumna, Dr. Alice R. McPherson, who completed a retinal fellowship under the mentorship of Dr. Schepens. The bust was unveiled on November 30, 1990 to coincide with Schepens' 40th anniversary.

During the celebration, Dr. McPherson paid tribute to 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 that has made such a tremendous difference in the lives of many others."

The bust was on prominent display in the foyer of the Institute for several years; it was then re-located to the Schepens Retina Associates Foundation at Beth Israel Deaconess Medical



Center, until about 2008. Today it resides in the iconic Schepens library, along with a plaque honoring the Founding Members of the Schepens International Society, trainees of Dr. Schepens, including Dr. McPherson who played a crucial role in its development. The Society and Dr. McPherson currently sponsor an annual lecture and gold medal presentation at the American Academy of Ophthalmology. ■

*[Source: Frans J. Van de Velde, MD, PhD]*

# Remembering a Master Mentor: The Robert Brockhurst Academic Development Award



Ophthalmologists around the country grateful for the mentoring years ago of Mass. Eye and Ear retina specialist Robert J. Brockhurst, MD, have come together to honor his legacy. Dr. Brockhurst passed away in May 2010. Now his work and influence are being recalled by those who trained with him, many of them now long established in their own clinical and research careers.

Led by retina specialist Dr. Steven Rose (class of '90), Clinical Associate Professor at the University of Rochester Medical Center in New York, and glaucoma researcher Dr. Murray Johnstone (class of '71), who is based at the University of Washington Medical Center in Seattle, nearly a dozen Mass. Eye and Ear-trained ophthalmologists have pledged initial contributions to seed the creation of the Robert Brockhurst Academic Development Award. Once fully funded at \$150,000, the Award will help support the academic training and development of clinical or research retina fellows by enabling them to attend and present at national conferences; this career-building exposure helps our young trainees not only to establish their careers, but provides key learning and networking opportunities.

Dr. Brockhurst was an Associate Clinical Professor of Ophthalmology at Harvard Medical School, where he taught throughout his career. He specialized in the surgical care of patients with macular degeneration, diabetic retinopathy, ocular trauma, retinal detachment and other vitreoretinal disorders. In addition to his clinical practice, he was a highly respected researcher and teacher at both Mass. Eye and Ear and the Schepens Eye Research Institute. He worked in the laboratory alongside Dr. Charles Schepens early on at the Retina Foundation. His groundbreaking work in the diagnosis and treatment of uveitis has helped many patients then and to this day. More recently, Dr. Brockhurst collaborated with Dr. Eliot Berson, MD, joining the Berman-Gund Laboratory for the Study of Retinal Degenerations at HMS in 1996, where he evaluated patients and served as co-investigator with Dr. Berson on several clinical studies of retinitis pigmentosa.

Long before training with Dr. Brockhurst, Dr. Steven Rose experienced being his patient. After he developed a retinal dialysis during a tennis mishap, the young college graduate wound up in Dr. Brockhurst's Retina Associates office. "His incredible touch was so gentle, yet he conveyed great skill and confidence and immediately put me at ease. Everything about him exuded experience, calm and reassurance," Dr. Rose recalled.

*"The incredible thing about Dr. Brockhurst was that his mentoring continued long after fellowship. He was truly interested in his fellows and what they were doing, and he was always there to offer guidance or lend an ear. This type of lifelong mentoring was a true gift he gave to his students."*

- Dr. Steven Rose

Years later, when Dr. Rose did a 4th year medical clerkship with Dr. Brockhurst and then trained with him as a retina fellow, his mentor's "healing touch" continued to inspire him – and it still does, he said. "There isn't a day that goes by that I don't try to mimic his wonderful gift of bringing comfort to patients."

Dr. Brockhurst's clinical approach was also unique. He was "a complete physician," Dr. Rose explained. "In this era of specialization, we're often accused of being too narrowly focused on the back of the eye. But he really stressed looking at all the systems associated with the eye because other systemic disease processes can be diagnosed based on the eye findings. He would put a strong emphasis on following the patient's course, even between appointments."

Once in practice, Dr. Rose continued to periodically consult with Dr. Brockhurst on particularly difficult cases. And he was not alone. Dr. Brockhurst was always available to his students. Dr. Johnstone agrees. He spent three months as a resident on Dr. Brockhurst's service, and eventually came to consider him a friend. "He was a man of remarkable energy," Dr. Johnstone said. "Whenever I had questions, he was there. And he always had great answers."

Many ophthalmologists across the country today benefited from Dr. Brockhurst's lifelong mentoring at Mass. Eye and Ear. "I think the establishment of this Award fund is a fitting tribute in honor of his work and influence," Dr. Rose added. ■

Help us seed the Robert Brockhurst Academic Development Award. Your support will pay tribute to the memory of Dr. Brockhurst and to our continuing mission of education at HMS. Please contact Melissa Paul at (617) 573-4168 or [melissa\\_paul@meei.harvard.edu](mailto:melissa_paul@meei.harvard.edu)



## SAVE THE DATES!

HMS DEPARTMENT OF OPHTHALMOLOGY

## SPECIAL EVENTS



**September 21-22, 2012**

### **Second International Biennial Symposium on AMD**

The Starr Center, 185 Cambridge Street, Boston, MA

Our 2010 inaugural symposium drew rave reviews and we look forward to another exciting event this year. On hand will be international experts from a diverse array of fields, as well as leaders from related disciplines. Topics include genetics/RPE/Bruch's membrane/choriocapillaris, inflammation, stem cells and tissue engineering, imaging, animal models, drug delivery, and neurodegenerative diseases. Please visit [www.schepens.harvard.edu/amd\\_symposium](http://www.schepens.harvard.edu/amd_symposium) to register.



**September 18-20, 2012**

### **5th Military Vision Symposium on Ocular & Vision Injury**

The Starr Center, 185 Cambridge Street, Boston, MA

Focused on military and civilian ocular research, the symposium will cover the topics of: combat ocular readiness, blast injury/blast eye, ocular pain, inflammation and infection, telehealth, telepresence & informatics, regenerative medicine, and vision funding. Attendance options are available in four defined categories. For information and to register, please visit: [www.schepens.harvard.edu/military\\_symposium](http://www.schepens.harvard.edu/military_symposium).