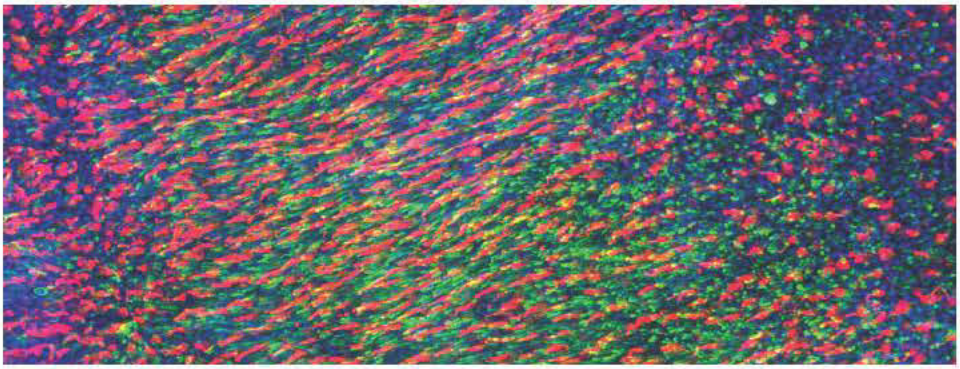
eyeWitness

HARVARD MEDICAL SCHOOL
DEPARTMENT OF Ophthalmology

NEWS FROM THE HARVARD MEDICAL SCHOOL DEPARTMENT OF OPHTHALMOLOGY



Retina transduced with AAV expressing green fluorescent protein. (Credit: Livia Carvalho, PhD and Luk Vandenberghe, PhD)

Going Viral: Gene Therapy for Ophthalmic Diseases

The Grousbeck Gene Therapy Center, directed by Luk H. Vandenberghe, PhD, is a leader in the use of gene therapy to fight blinding diseases. Dr. Vandenberghe's laboratory, considered the nucleus of the Center, is working to develop safe, effective, broadly applicable technologies for genetic therapies that treat diseases that affect vision.

The Grousbeck Gene Therapy Center was made possible through a charitable gift from the Grousbeck Trust in 2013. Devoted to research and educational initiatives related to genetically based ophthalmologic conditions, such as Leber congenital amaurosis and retinitis pigmentosa, the Grousbeck family is also establishing a Chair at Massachusetts Eye and Ear in Gene Therapy.

Wyc Grousbeck

"Gene therapy has the potential to be a game changer for the many people born with genetic conditions that cause blindness, and my family and I are deeply privileged to be part of this effort," commented Wycliffe "Wyc" Grousbeck, who also serves as Chair of the Mass. Eye and Ear Board of Directors and Co-owner and Chief Executive Officer of the Boston Celtics.

The Grousbeck family's gift also allows researchers to focus on long-term goals. "Compared with traditional funding streams, support from the Grousbeck Trust enables us to perform research with a longer term vision as well as pursue high risk, high impact ideas that are difficult to fund otherwise," Dr. Vandenberghe said. "This allows us to be more innovative, spend more time conducting research, and bring therapies from bench to bedside faster."

In just three short years, Dr. Vandenberghe's laboratory has begun work on three programs to treat five forms of inherited retinal degeneration. The scientists at the Center are building technologies for improved gene delivery that will enable genome editing for treating blindness.

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HARVARD MEDICAL SCHOOL
DEPARTMENT OF Ophthalmology

MAY 2015
Issue #28

Eye Witness is published three times per year by the Harvard Medical School Department of Ophthalmology and is intended for faculty, trainees, staff, alumni, affiliates, partners, and friends.

The HMS Department of Ophthalmology strives to provide:

- ✓ Premier clinical care and attention to the patient experience
- ✓ Transformational research that eliminates blinding diseases
- ✓ World-class training of future leaders

SEND US YOUR NEWS!
Please forward news, comments, and mailing changes to eyenews@meei.harvard.edu

GUEST COMMENTARY

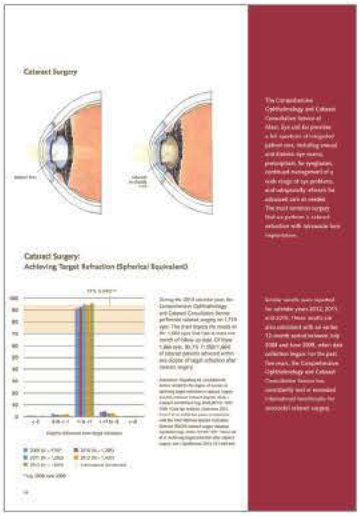
The Proof is in the Pudding: Mass. Eye and Ear's Quality and Outcomes Initiatives

Teresa C. Chen, MD
Medical Director of Quality and Outcomes, Ophthalmology

At Massachusetts Eye and Ear, we often boast that our doctors deliver the best *quality* care. But how do we prove it? We prove it through objective reporting of *outcomes*.

As a cornerstone for the Mass. Eye and Ear Quality Program, an institutional initiative, we have established a Steering Committee for Quality, which meets weekly to review issues in four core areas: outcomes, provider excellence, clinical incidents response, and process improvement. In Ophthalmology, the activities of this group are overseen by Joan W. Miller, MD, FARVO, Chief of Ophthalmology at Mass. Eye and Ear. The Steering Committee for Quality provides consistent interaction between Quality leaders in Ophthalmology, Otolaryngology, Anesthesia, Nursing, Legal, Information Services, and others. This close interaction fosters a team approach to achieve best practices and enhances communication between functional areas of the hospital.

Each year, we publish the *Quality and Outcomes* book that objectively evaluates quality and outcomes for the public. Now in its sixth year of reporting outcomes, the report serves as a testament to the premier care we provide for our patients at Mass. Eye and Ear and other Harvard Medical School Department of Ophthalmology affiliates.



Mass. Eye and Ear Quality and Outcomes

For instance, for cataract surgery, the national benchmark for achieving within 1 diopter of target refraction is between 71 percent and 94 percent.[1] Even though we have always exceeded average international benchmarks, our latest data show that we now exceed the upper range, with 96 percent of our patients achieving target refraction criteria. Our outcome measure was recently submitted to Medicare and is now being considered as a nationwide outcomes measure. Mass. Eye and Ear also has some of the lowest reported rates of endophthalmitis after intravitreal injections, which is one of the most common outpatient procedures in ophthalmology.[2]

Ensuring provider excellence is also a high priority for our institution. New providers undergo proctoring with direct observation during their first surgical cases. We also require re-credentialing and conduct reviews every six months to re-assess the performance of our clinicians and surgeons based on their subspecialties.


Matthew Gardiner, MD

When problems do arise, clinical incidences are tracked electronically using software called RL Solutions. The Quality Committee reviews these reports to identify trends and implement a correction plan. Matthew Gardiner, MD, Associate Chief for Clinical Operations, and I meet weekly to discuss potential areas of improvement, which are generated from these RL reports.

We continue to improve quality by interacting with other existing hospital committees—such as the OR committee, infection control, medical records, patient family advisory council, and others. For example, during a Steering Committee for Quality meeting, we addressed a case of a wrong intraocular lens (IOL), a serious reportable event. During the post-event review process, we found that poor handwriting on order forms was the root cause of this wrong IOL. We corrected the problem by mandating that all new IOL orders be typed. We published our "lessons learned" in 2012, addressing the issues associated with wrong IOLs, which is one of the most common preventable medical errors in ophthalmology.[3]

Dr. Miller and I also addressed issues in 2014—such as how to create new policies and how to enforce such policies—when we published a short viewpoint in *JAMA Ophthalmology*, "Sentinel Events, Serious Reportable Events, and Root Cause Analysis."[4] In this viewpoint, we describe our multidisciplinary medical team approach for identifying the primary cause, or root cause, of sentinel events. First, the team identifies the potential risks that contribute to the event and then determines if those risks can affect other areas of care. Next, the team works collaboratively to develop solutions in order to prevent more medical errors. They then evaluate the organization's culture, leadership, in-service training, and technology to develop recommendations or new policies that will help prevent recurrences of the event. Lastly, the team establishes metrics to monitor the effectiveness of, and adherence to, the new policies. The ultimate goal is to improve quality outcomes in ophthalmology. Our article is one of the first to demonstrate how leadership can create and reinforce new policies that improve ophthalmology outcomes.

The public desires a robust and transparent assessment of quality care, and we remain committed to publishing such a report. ■

[1] Simon SS, Chee Y, Haddadin RI, Veldman PB, Borboli-Gerogiannis S, Brauner SC, Chang KK, Chen SH, Gardiner MF, Greenstein SH, Kloek CE, Chen TC. Achieving Target Refraction After Cataract Surgery. *Ophthalmology*. 2014;121(2):440-4.

[2] Englander M, Chen TC, Paschalis EI, Miller JW, Kim I. Intravitreal Injections at the Massachusetts Eye and Ear Infirmary: Analysis of Treatment Indications and Postinjection Endophthalmitis Rates. *British Journal of Ophthalmology*. 2013;97(4):460-5.

[3] Schein OD, Banta JT, Chen TC, Pritzker S, Schachat AP. Lessons Learned: Wrong Intraocular Lens. *Ophthalmology*. 2012 Oct;119(10):2059-64.

[4] Chen TC, Schein OD, Miller JW. Sentinel Events, Serious Reportable Events, and Root Cause Analysis. *JAMA Ophthalmology*. Published online March 05, 2015. doi:10.1001/jamaophthalmol.2015.0672.

Annual Meeting and Alumni Reunion

May 29-31, 2015

Each year, alumni gather in Boston for the HMS Department of Ophthalmology's Annual Meeting and Alumni Reunion. This year, alumni speakers hail from the Moran Eye Center/ University of Utah Medical School; Scheie Eye Institute/ University of Pennsylvania; the University of Connecticut School of Medicine; and Kellogg Eye Center/ University of Michigan.

Two prominent members of the Department, both HMS Ophthalmology-trained, will be recognized for their outstanding contributions to clinical care and research. **Claes Dohlman, MD, PhD** will receive the 2015 Distinguished Clinical Achievement Award. Dr. Dohlman completed his fellowship at Mass. Eye and Ear and is *Emeritus* Professor of Ophthalmology at HMS.

Marshall Doane, PhD will receive the Distinguished Research Achievement Award. He is an *Emeritus* Senior Scientist at Schepens and a retired Assistant Professor of Ophthalmology at HMS. He was a research fellow with Dr. Dohlman. ■

Honored with an unprecedented number of awards, achievements and attributions, the HMS Department of Ophthalmology reached new heights this year in the mile-high city of Denver, Colorado, which hosted the 2015 Annual Meeting of the Association for Research in Vision and Ophthalmology (ARVO) May 3–7.

Champalimaud Vision Award Lecture

2014 Champalimaud Vision Award Laureates. (Photo credit: © Association for Vision and Research in Ophthalmology (ARVO) 2015, used by permission.)

At the 2015 Annual Meeting, the **Champalimaud Vision Award Lecture** honored the recipients of the **2014 António Champalimaud Vision Award**, the highest distinction in ophthalmology and often called the "Nobel Prize of Vision." Six of the seven 2014 Champalimaud Laureates are affiliated with HMS: **Anthony P. Adamis, MD, FARVO, Lloyd Paul Aiello, MD, PhD, FARVO, Patricia A. D'Amore, PhD, MBA, FARVO, Evangelos S. Gragoudas, MD, FARVO, George L. King, MD, FARVO,** and **Joan W. Miller, MD, FARVO**. Dr. Miller represented the HMS-affiliated Laureates in the lecture, entitled "VEGF: From Discovery to Therapy," which recounted the identification of VEGF as the primary therapeutic target in vascular retinal disease. In his introduction to the lecture, **Alfred Sommer, MD, FARVO** (HMS '67), Chairman of the Champalimaud Vision Award Jury, noted that this achievement concluded "a quest that consumed more than half a century" by a "legion" of researchers searching for this elusive target.

ARVO by the Numbers

35 papers
188 posters
3 award lectures
6 minisymposia
8 special interest groups
2 cross-sectional group sessions
4 workshops
11 clinical fellows
14 residents
76 research fellows
10 travel grants

Abstract presentations are an integral part of the ARVO experience. This year, HMS Ophthalmology faculty and trainees authored 255 abstracts. In addition to a strong faculty turnout, 11 clinical fellows, 14 residents, and 76 research fellows attended ARVO. Of those trainees, 10 clinical/research fellows received travel grants: **Miguel G Andrades, MD, PhD, Takashi Miyai, MD, Yureeda Qazi, MB, BS, Elise Taniguchi, MD, Chengxin Zhou, PhD, Chi-Hsiu Liu, PhD, Victoria Chang, MD, Yihe Chen, MD, Mehrdad Khajavi, PhD,** and **Namrata Nandakumar, MD.**

Prelude to the Annual Meeting

According to ARVO, about 1,000 researchers and clinicians participate in various events one day before the Annual Meeting officially begins. This year, the Saturday events occurred on May 2 and included:

- The **ARVO Imaging in the Eye Conference**, which showcases imaging techniques and applicationsto clinical and experimental ophthalmology. HMS Ophthalmology faculty and trainees contributed four posters and one paper presentation to 2015 ARVO Imaging in the Eye.
- **ARVO Education Courses**, in which ARVO researchers and clinicians provide thoughtful insight on various topics for fellow ARVO members. HMS faculty members taught four ARVO Education Courses this year.
- The **ARVO Foundation and Dowling Society Gala**, honoring members and donors who have contributed to ARVO and the ARVO Foundation. Honored at the Gala this year was **Martine J. Jager, MD, PhD, FARVO**, Adjunct Scientist at Schepens/Mass. Eye and Ear. Dr. Jager conducted a research fellowship at Bascom Palmer Eye Institute under the late J. Wayne Streilein, MD, who later served as president of Schepens from 1995 to 2004. As the first international president of ARVO (serving from 2007 to 2008), Dr. Jager has been instrumental in expanding ARVO's international presence, membership and outreach.

Martine J. Jager, MD, PhD, FARVO

- **Alcon Research Institute Awards**: Also on Saturday, the Alcon Research Institute (ARI) announced its annual awards at the Podos Colloquium, which honors the late Steven M. Podos, MD, founding member of ARI and first chair of the ARI Scientific Selection Committee. This year, **James Chodosh, MD, MPH, FARVO**, was among the recipients of the prestigious ARI Award. Recipients of the ARI Young Investigator Grants included **Lucia Sobrin, MD, MPH**, and **Demetrios Vavvas, MD, PhD.**

James Chodosh, MD, MPH, FARVO

Lucia Sobrin, MD, MPH

Demetrios Vavvas, MD, PhD

Top Influencers in Online Networking

In keeping with the theme of ARVO 2015, "Powerful Connections: Vision Research and Online Networking," HMS Ophthalmology joined the Twitterverse as @HMSeye, making ARVO-related tweets under the hashtags #HMSARVO and #ARVO2015. According to healthcare social media analytics, @HMSeye was one of the "top influencers" of #ARVO2015 each day that ARVO was in session.

ARVO Award Lectures

Each year, four **ARVO Achievement Award Lectures** are presented at the Annual Meeting, and in 2015, three lectures were delivered by HMS Ophthalmology faculty and alumni:

Joan W. Miller, MD, FARVO, Anneke den Hollander, PhD, and Patricia A. D'Amore, PhD, MBA, FARVO. (Photo credit: Prof. Sarah Coupland)

- **Patricia A. D'Amore, PhD, MBA, FARVO,** was the recipient of the 2015 Proctor Medal, and presented an award lecture, entitled "Regulation of Retinal Vascular Growth: Development, Pathology and Therapy."
- **Joan W. Miller, MD, FARVO,** delivered the 2015 Weisenfeld Award Lecture, entitled "Beyond VEGF," and discussed future directions for the treatment of age-related macular degeneration (AMD) beyond current inhibitors of vascular endothelial growth factor (VEGF). Evangelos S. Gragoudas, MD, FARVO, recipient of the 2006 Weisenfeld Award, introduced the lecture.
- **Anneke den Hollander, PhD,** Research Fellow at Mass. Eye and Ear from 2007 to 2008, delivered the Cogan Award lecture, entitled "How the Omics Revolution Transformed Ophthalmology."

More Achievements and Awards

- **2015 ARVO Gold Fellows** included current faculty members **David Hunter, MD, PhD, FARVO** and **Joan W. Miller, MD, FARVO,** along with five alumni and/or former faculty: **Stephen Burns, PhD, FARVO, M. Elizabeth Hartnett, PhD, FARVO, Julia Haller, MD, FARVO, Andrew W. Taylor, PhD, FARVO,** and **Terri Young, MD, MBA, FARVO.**
- **2015 ARVO Silver Fellows** included current faculty members **Pablo Argüeso, PhD, FARVO** and **Pedram Hamrah, MD, FARVO,** as well as two alumni: **Natalie Afshari, MD, FACS, FARVO** and **R. Rand Allingham, MD, FARVO.**
- **Anthony Adamis, MD, FARVO** received the **Fight for Sight Alumni Achievement Award.** Among his various leadership positions, Dr. Adamis is VP and Global Head of Ophthalmology at Genentech, Inc. and a Lecturer on Ophthalmology at HMS.
- **Joseph B. Ciolino, MD** won 2nd place in the **Merck Innovative Ophthalmology Research Award** (category: Glaucoma) for his project, "*In vivo* Performance of a Drug-eluting Contact Lens to Treat Glaucoma for a Month."
- **Evi Kolovou, MD,** a research fellow who works with Claes Dohlman, MD, PhD, also received 2nd place in the **Merck Innovative Ophthalmology Research Award** (category: Ocular Surface) for her project, "ABCB5 is a Limbal Stem Cell Gene Required for Corneal Development and Repair."
- **Jennifer Tran, BA** of Schepens Eye Research Institute/ Mass. Eye and Ear, won 2nd place in the **Thesis in Three Competition** for her video, "Corneal Scarring: Finding a Better Way to Heal," a three-slide, three-minute summary of her work aimed at non-specialists.

HMS Ophthalmology Reception

Photo credit: Allée Photography

Incoming Residents: Class of 2018

- Jonathan Chou, MD
- Isaiah Giese, MD
- Natalie Homer, MD
- Benjamin Jastrzembski, MD
- Michael Lin, MD
- Elizabeth Rossin, MD, PhD
- Cindy Ung, MD
- Jay Wang, MD

Optometry Resident:

- Lauren Moses, OD

2015-2016 Clinical Fellows

Cornea
- Steven Greenstein, MD*
- Shaohui, Liu, MD*
- Yuna Rapoport, MD, MPH*
- Hajirah Saeed, MD
- Jia Yin, MD*

Glaucoma
- Farikhah Anwar, MD*
- Jay Arun-Rajiv Joseph, MD*
- Courtney Bovee, MD*

Neuro Ophthalmology
- Cinthi Pillai, MD*
- Olga Szenberg, MD*
- Ivana Vodopivec, MD*

Oculoplastics
- Juan Carols Jimenez, MD*
- Lora Dagi Glass, MD

Pathology
- Anna Stagner, MD

Pediatric Ophthalmology
(Boston Children's Hospital/ Mass. Eye and Ear)
- Aubrey Gilbert, MD, PhD*
- Euna Koo, MD*
- Maan Alkharashi, MD*

Retina
- Yewlin Chee, MD
- Daniel Learned, MD*
- Thanos Papakostas, MD*
- Safa Rahmani, MD*
- Mira Sachdeva, MD, PhD
- Dong "Dawn" Yang, MD

Inherited Retinal Degenerations
- Rachel Huckfeldt, MD, PhD*

Medical Retina
- Mehrine Shaikh, MD*

Retina
(Joslin Diabetes Center)
- Rasha Barham, MD
- Hala El Rami, MD
- Aditi Gupta, MD

Uveitis
- Lindsay Ambrecht, MD*

(*new)

Thomas Liesegang Shares Expertise in Ophthalmology Publishing as 2015 Jakobiec Lecturer

Thomas J. Liesegang, MD, Professor of Ophthalmology, *Emeritus* at the Mayo Clinic, delivered the Frederick A. Jakobiec Lecture in Meltzer Auditorium on Monday, March 30, 2015. Some 50 people were on hand for the lecture, entitled, "The Challenging Environment for an Ophthalmology Journal."

Dr. Liesegang is an internationally renowned cornea specialist who has been in practice at the Mayo Clinic for over 37 years. In addition to his clinical practice, he has influenced the field of cornea through teaching, lecturing, and publishing. He has contributed more than 300 articles and, as Chief Editor of *The American Journal of Ophthalmology*, recently has focused his writings on topics of editorship and the ethical issues in publishing, including financial disclosure and conflict of interest, plagiarism, and accountability.

Evangelos Gragoudas, MD, the Charles Edward Whitten Professor of Ophthalmology and Director of the Retina Service at Mass. Eye and Ear, presented introductory remarks to the lecture.

"The Jakobiec Lecture was a big success," Dr. Gragoudas commented. "Dr. Liesegang gave a fascinating lecture regarding different issues that are facing ophthalmic publications at the present time."

The Frederick A. Jakobiec Lecture was established to honor the academic leadership of Frederick Jakobiec, MD, DSc, the Henry Willard Williams Professor of Ophthalmology, Emeritus and Professor of Pathology, Emeritus at HMS; and Director of the David G. Cogan Laboratory of Ophthalmic Pathology at Mass. Eye and Ear. He is also the former Chief of Ophthalmology at Mass. Eye and Ear and Chair of the HMS Department of Ophthalmology. ■

SIGHT

THE STORY OF VISION

Eli Peli, MSc, OD, Joseph Rizzo III, MD, and **Gang Luo, PhD** of Mass. Eye and Ear appear in the recently released documentary trailer, "Sight: The Story of Vision." The feature-length documentary intended for PBS distribution is part of a set of multimedia products developed by Koenig Films. Dr. Peli comments on the evolution of eye glasses from vision-enhancing aids to fashion accessories. Dr. Rizzo mentions his prosthetic device that delivers electro-stimulation to the retina, and Dr. Luo is filmed testing a head-mounted display system for people with tunnel vision.

In addition to the documentary, there are plans for an immersion/planetarium theater program for children and a website that will contain all of the full-length interviews for self-guided learning. The goal of this program is to improve the public's understanding of vision science and its history, while also providing education about the worldwide vision crisis. The project is funded by individuals, corporations, non-profits, and public television donations. ■

Innovative Reimbursement Models May Accelerate Breakthrough Treatments in Ophthalmology


Joseph B. Ciolino, MD

Joseph B. Ciolino, MD published a Viewpoint in the April 2015 *JAMA Ophthalmology* in which he suggests that novel reimbursement initiatives may help expedite the research and development of new ophthalmological therapeutics. Many factors influence the research and development process of investigational therapeutics. For instance, the initial investments required to develop new devices are substantial, and there are often delays between FDA approval of a new treatment and Medicare coverage or incentive decisions, he noted. According to Dr. Ciolino, new policies within the Center for Medicare and Medicaid Services (CMS) could accelerate regulatory approval. He advocates for a program that simultaneously reviews new devices for both FDA approval and CMS incentive decisions. In cases where there are evidence gaps, Dr. Ciolino suggests that CMS combine incentive payments with coverage that has evidence development-like policies. This would ensure that increased expenditures were for reasonable and necessary treatments. ■

Wearable Device Helps Patients with Vision Loss Avoid Collisions


Gang Luo, PhD

Gang Luo, PhD and colleagues demonstrated that a pocket-sized warning device helped prevent collisions in patients with impaired peripheral vision. The device predicts impending collisions based on time to collision rather than proximity. It gives warnings only when the users approach obstacles, not when users stand close to objects, or when moving objects just pass by. Working with two postdoctoral fellows at Schepens/Mass. Eye and Ear—**Shrinivas Pundlik, PhD** and **Matteo Tomasi, PhD**—Dr. Luo set up an obstacle course that included 46 stationary obstacles and oncoming pedestrians. Twenty-five patients with impaired peripheral vision walked through the obstacle course with and without the device. The number of collisions and walking speed were measured. Compared to walking without the device, collisions were reduced significantly by about 37 percent with the device, and walking speed barely changed. No patient had more collisions when using the device. Their findings are featured in *Investigative Ophthalmology and Visual Science* (IOVS). "We are excited about the device's potential value for helping visually impaired and completely blind people walk around safely. Our next job is to test its usefulness in patients' daily lives in a clinical trial study," Dr. Luo said. ■

Biocarbonate Alters Sensitivity to Light and Tracking of Moving Objects


Clint Makino, PhD

According to **Clint Makino, PhD, Xiao-Hong Wen, PhD,** and **Tomoki Isayama, PhD** of Mass. Eye and Ear and colleagues at Salus University, bicarbonate can alter vision by modifying signals generated by rod and cone photoreceptors that detect light. Within rods and cones, a small soluble molecule, cGMP, links photon absorption to the electrical activity of the photoreceptor. In the light, cGMP is destroyed and ion channels are closed. Positively charged sodium ions cease to enter the rod or cone, and the membrane potential becomes hyperpolarized. Bicarbonate directly stimulates an enzyme called guanylate cyclase that synthesizes cGMP. "By opposing the effect of light, bicarbonate limits the size of the photon response and quickens its recovery," says Dr. Makino. "As a result, sensitivity to light is slightly lower, but our ability to track moving objects is improved." These findings were published in the *Journal of Biological Chemistry*. ■

Intensive Insulin Therapy Associated with Lower Risk of Ocular Surgery for Patients with Type 1 Diabetes


Lloyd Paul Aiello, MD, PhD

Lloyd Paul Aiello, MD, PhD of Joslin Diabetes Center/Beetham Eye Institute and colleagues associated with the Diabetes Control and Complications Trial (DCCT) – Epidemiology of Diabetes Interventions and Complications (EDIC) Research Group published a study in the *New England Journal of Medicine* that found that intensive insulin therapy was associated with a substantial reduction in the long-term risk of ocular surgery among patients with Type 1 diabetes. This study included patients who were enrolled in the DCCT—a landmark study published in 1993 that showed that intensive therapy for patients with diabetes over 6.5 years reduced the onset of retinopathy by 76 percent and progression by 52 percent when compared with conventional therapy. A subsequent report, the EDIC, showed that the group undergoing intensive therapy had reduced microvascular and macrovascular complications from glycemia from the group receiving conventional therapy, despite both groups having similar glycemia at the start. Taken together, these results show the importance of early and intensive therapy for Type 1 diabetes. ■

Our Fiscal Year Is Coming to a Close. Please Consider a Gift!

Help us continue a culture of excellence by planting the seeds of possibility today.

Gifts provided to the 2015 Alumni Giving Society provide extraordinary opportunities for learning and discovery.

You may designate your gift in any way you choose or support one of our numerous programs. Gifts are tax-deductible.

Members who make annual gifts of $1,000 or more within the fiscal year (October 1–September 30) are invited to Department events throughout the year and are recognized in this newsletter and Mass. Eye and Ear publications.

To Learn More...

Please contact Julie Dutcher in the Development Office:
julie_dutcher@meei.harvard.edu

617-573-3350

Gifts are tax deductible.

Our alumni know first-hand that supporting the vital work of our students and faculty in the HMS Department of Ophthalmology helps drive continued achievement across all areas of education, research, and patient care. In 2009, we launched the ***Alumni Giving Society of HMS Ophthalmology @ Mass. Eye and Ear*** as a means to encourage support of the institution and teachers who inspired us. Now, six years later, we have seen many faculty and former faculty, residents, and fellows give in ways that inspire them.

We extend our grateful thanks to the current 2015 Society members:

Alumni Giving Society 2015 (October 1, 2014 to May 15, 2015)

CHAMPION Gifts of $25,000 or more

- Joan W. Miller, MD
- Richard J. Simmons, MD

VISIONARY Gifts of $10,000 or more

- Thaddeus P. Dryja, MD
- Frans Van de Velde, MD, PhD
- Jack V. Greiner, OD, DO, PhD

INNOVATOR Gifts of $5,000 - $9,999

- Dean F. Arkfeld, MD

PIONEER Gifts of $2,500 - $4,999

- James Chodosh, MD, MPH
- Cynthia L. Grosskreutz, MD, PhD
- Sulayman E. Jallow, MD
- Simmons Lessell, MD
- Shizuo Mukai, MD
- James M. Gordon, MD
- David G. Hunter, MD, PhD
- Jeffrey C. Lamkin, MD
- Michael F. Marmor, MD

FRIEND Gifts of $1,000 - $2,499

- Christopher M. Andreoli, MD
- Mark W. Balles, MD
- Lionel D. Chisholm, MD
- George E. Garcia, MD
- B. T. Hutchinson, MD
- Paul Kalina, MD
- Peter R. Laibson, MD
- Byron S. Lingeman, MD
- David Mark, MD
- Richard M. Robb, MD
- Rebecca C. Stacy, MD, PhD
- Raymond Wee, MD
- James V. Aquavella, MD
- Gary E. Borodic, MD
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- John A. Irvine, MD
- Ernest W. Kornmehl, MD
- Daniel R. Lefebvre, MD
- John I. Loewenstein, MD
- Louis R. Pasquale, MD
- Felix N. Sabates, MD
- Erich C. Strauss, MD

Surgical Training Heads to New Heights

A CALL TO ACTION:

Expanding the Surgical Training Facility
Fundraising target: $1 million

The Surgical Training Facility at Mass. Eye and Ear is a heavily used, critical component of the surgical training program. Open 24 hours a day, the facility features one full practice station and includes equipment such as a Leica operating microscope, an Alcon Infiniti phaco machine, and the EyeSi Surgical Simulator. Human practice eyes are available through the New England Eye Bank, and pig eyes are ordered regularly.

We plan to triple the space of the Surgical Training Facility, enabling us to further improve the training of our residents and fellows, as well as host courses for outside physicians. The expanded facility will accommodate eight practice stations, each of which will have the latest technology, such as training machines for vitreoretinal and cataract surgery. The facility will also include a proctor station with a plasma screen, as well as ample space for surgical supplies, state-of-the-art surgical equipment, and an ophthalmic surgery simulator.

To contribute, please contact Julie Dutcher in the Development Office:
E: julie_dutcher@meei.harvard.edu | T: 617-573-3350

Director of the Residency Training Program Carolyn Kloek, MD and Vice Chair for Education John Loewenstein, MD are taking a good program–the Harvard Medical School (HMS) Ophthalmology Residency Training Program–and making it even better. These innovators in medical education, along with Associate Residency Program Director Peter Veldman, MD, have committed to improving the quality of surgical training by focusing on developing cognitive and technical surgical skills outside of the operating room.

Curricular innovations spearheaded by Drs. Kloek and Loewenstein, such as the stepwise surgical training program and the Mass. Eye and Ear Cataract Master™ (developed in collaboration with Bonnie An Henderson, MD and Adam Neaman, PhD), have been in place for several years and are now becoming more robust. A core surgical training facility at Mass. Eye and Ear is helping to better prepare trainees for the operating room experience, and there are plans in place to expand this faculty to create more pre-OR training opportunities. The PGY-4 rotations have been restructured to be more cohesive and subspecialty-based, and residents are receiving additional surgical training opportunities during their subspecialty rotations. With eight core surgical training specialists, the program emphasizes one-to-one surgical instruction to help residents polish their surgical skills.

These efforts have led to an increase in the number of surgeries each resident performs and an overall improvement in the quality of the residents' surgical experience. On average, residents in the class of 2014 conducted almost three times as many glaucoma surgeries than residents in the class of 2010. Residents in the class of 2014 also completed 41 percent more cataract surgeries than their class of 2010 counterparts. In 2014, residents conducted an average of 521 primary surgeries, which was a 90 percent increase since 2010. In almost all categories of surgery, including cataract surgery, residents' surgical performance was above the 70th percentile nationally. Dr. Kloek presented these findings at the Association for University Professors in Ophthalmology meeting in January 2015. ■

AAV Retinal Targeting following Subretinal Injection (Design: Peter Mallen)

In addition to the Vandenberghe Laboratory, the Grousbeck Gene Therapy Center also includes a viral vector core facility known as the Gene Transfer Vector Core (GTVC), which is located at Schepens Eye Research Institute/Mass. Eye and Ear. The GTVC provides a variety of reagents and services to researchers at Harvard University and in Boston's surrounding areas who need support for preclinical gene therapy studies and basic research gene transfer applications. In addition to providing high-titer, high-quality, research-grade viral vectors, the GTVC provides consultation and expertise to enable others to target their disease of interest.

The endeavor to cure blindness using a genetic approach at Harvard Medical School can be traced back to research by Thaddeus Dryja, MD, Eliot Berson, MD, and colleagues in the 1980s. They described a specific point mutation in the rhodopsin gene that caused one form of retinitis pigmentosa. In the decade that followed, research into the genetic cause of eye disease accelerated, and investigators started to realize the therapeutic potential of this wealth of information. However, it was not until the turn of the century that researchers were able to bring together the key components to develop what is now known as gene therapy: (1) a thorough understanding of the disease and its genetic basis, (2) a method for intervening in the disease process at a genetic level, and (3) the ability to deliver therapeutic genes to the relevant cells safely and efficaciously.

Today, Dr. Vandenberghe is at the forefront of translational genetic research for inherited retinal degenerations. He earned his PhD in biomedical engineering and virology, and subsequently trained in four different laboratories, learning about the basic biology of HIV and how to harness the powers of HIV to treat cancer. He also studied *in vivo* gene therapy—a procedure by which a gene is directly transferred into the diseased tissue to mitigate disease. He then brought this technology to the field of ophthalmology when he worked in the laboratory of Jean Bennett, MD, PhD—a member of the Institute of Medicine and HMS graduate—at the Scheie Eye Institute/University of Pennsylvania. A pioneer in the field, Dr. Bennett was critical in bringing forth the first *in vivo* gene therapy to patients with childhood retinal blindness; she not only demonstrated that gene therapy was safe, but also demonstrated its effectiveness.

As an expert in adeno-associated viral vectors, Dr. Vandenberghe is now helping to position gene therapy as a broadly applicable clinical modality in ophthalmology for diseases with unmet needs. He and his team of researchers are identifying current translational hurdles with the goal of overcoming them and designing safe therapies for all inherited forms of retinal degenerations. In addition to directing the Grousbeck Gene Therapy Center, he is a member of the Howe Laboratory and the Berman Gund Laboratory for the Study of Retinal Degenerations at Mass. Eye and Ear, and serves as Associate Director for the Ocular Genomics Institute (OGI). The OGI, led by Eric Pierce, MD, PhD, and the Grousbeck Gene Therapy Center are working closely to achieve common goals through genetics and genomics. ■

"I feel incredibly lucky to be in this environment and receive this level of support from the Department and the Grousbeck family," said Dr. Vandenberghe. "The ecosystem within Mass. Eye and Ear, Harvard, and Boston allows us to connect with basic researchers, clinicians, and researchers who have a deep understanding of the disease, and to work with talented surgeons to deliver these gene therapies. This unique environment will allow us to advance treatments for blinding diseases for which limited or no treatment is currently available."

Luk Vandenberghe, PhD

Upcoming Events

Visit HMS Department of Ophthalmology online at
eye.hms.harvard.edu

- Calendar
- News and Events
- Publications

Ophthalmology Grand Rounds

Grand Rounds are held every Thursday from 8:00 to 9:00 am in the 3rd Floor Meltzer Auditorium at Mass. Eye and Ear and simulcast to the Karp 11 conference room at Boston Children's Hospital, Joslin Diabetes Center, and Mass. Eye and Ear, Longwood. Continuing Medical Education credit is available. Check the online calendar for additional dates and times. CME

Basic Science Research Fellows' Recognition Day

Starr Center, Schepens
June 3, 2015, 1:30 pm

Cornea Center of Excellence Visiting Professor

Meltzer Auditorium, Mass. Eye and Ear
Course Director: Reza Dana, MD, MSc, MPH, FARVO

June 11-12, 2015: Karsten Gronert, PhD Professor of Vision Science and Optometry; Vision Science Program Chair, University of California, Berkeley
CME

11th Annual HMS Intensive Cataract Surgical Training Course for Second-Year Residents

Meltzer Auditorium, Mass. Eye and Ear
Course Directors: Sherleen Chen, MD and Roberto Pineda II, MD
June 13-14, 2015

Special Faculty Grand Rounds

Meltzer Auditorium, Mass. Eye and Ear
Course Directors: Joan Miller, MD, FARVO, Simmons Lessell, MD, Joseph Rizzo III, MD, FARVO, and Yewlin Chee, MD
June 18, 2015, 8:00-9:00 am: Louis Pasquale, MD, HMS Associate Professor of Ophthalmology and Director of Mass. Eye and Ear's Glaucoma Service and Ophthalmology Telemedicine program; Brian Song, MD, HMS Instructor in Ophthalmology; and Lloyd Paul Aiello, MD, PhD, HMS Professor of Ophthalmology present "Telemedicine in Ophthalmology" CME

Schwartz Center Grand Rounds

Meltzer Auditorium, Mass. Eye and Ear

June 23, 2015, 12:00 pm: Peter Veldman, MD, Instructor in Ophthalmology at HMS and a member of the Cornea and Refractive Surgery Service at Mass. Eye and Ear, presents "Social Media and the Clinician"

Graduation for Residents and Clinical Fellows

Meltzer Auditorium, Mass. Eye and Ear
June 25, 2015, 4:00 pm

Joint Schwartz Center/QHP Grand Rounds

Meltzer Auditorium, Mass. Eye and Ear
Course Director: Carolyn Kloek, MD

July 23, 2015, 8:00 am: Eric Pierce, MD, PhD, Solman and Libe Friedman Associate Professor of Ophthalmology at HMS; and Director of the Electroretinography Service, the Berman-Gund Laboratory for the Study of Retinal Degenerations, and the Ocular Genomics Institute (OGI) at Mass. Eye and Ear; and Emily Place, MS, CGC, a genetic counselor and research study coordinator in the OGI.

6th Annual Mass. Eye & Ear Vitrectomy Course

Mass. Eye and Ear
Course Directors: John Loewenstein, MD, Demetrios Vavvas, MD, PhD and Dean Eliott, MD
July 31 – August 1, 2015

Harvard Cornea Center of Excellence International Workshop

Starr Center, Schepens
Course Director: Reza Dana, MD, MSc, MPH, FARVO

October 15, 2015: This one-day workshop precedes the Cornea Conference and strengthens international collaborations in the field of cornea and ocular surface. This event attracts a multidisciplinary group of scholars, both physicians and scientific researchers, who present current research findings, exchange scientific ideas, and form new collaborations.

Blood and lymphatic vessels in the cornea after transplantation. (Credit: Takenori Inomata, MD, PhD)

29th Biennial Cornea Conference

Starr Center, Schepens
Course Directors: Reza Dana, MD, MSc, MPH, FARVO and James Chodosh, MD, MPH

October 16-17, 2015: Since the 1960s, the Biennial Cornea Conference has explored current basic and translational research developments of the cornea and anterior ocular surface, promoting interaction and discussion among leaders in the field of Cornea. The conference promotes interaction and discussion among leaders in the field and builds links between today's exciting research and the numerous diseases that affect this portion of the eye. Learn more at: **www.schepens.harvard.edu/cornea2015**

Cornea Center of Excellence Visiting Professor

Meltzer Auditorium, Mass. Eye and Ear

Course Director: Reza Dana, MD, MSc, MPH, FARVO

September 10-11, 2015: Alexander V. Ljubimov, PhD, FARVO, FRSM, Professor of Biomedical Sciences and Neurosurgery; Director of Regenerative Medicine Institute Eye Program at Cedars-Sinai Medical Center; Professor of Medicine, David Geffen School of Medicine, University of California, Los Angeles. CME

Boston Ophthalmology International Visiting Professor in Cornea and External Eye Diseases

October 28, 2015, 4:00 pm – 6:30 pm, Boston University

October 30, 2015, 12:00 pm – 1:45 pm, MGH, Ether Dome

October 30, 2015, 1:45 pm – 6:30 pm, Mass. Eye and Ear, Meltzer Auditorium

Per Fagerholm, PhD, Professor of Ophthalmology, Linköping University and Chairman of Research and Education in the Department of Ophthalmology, University Hospital Linköping

Course Director: Mary Daly, MD

Co-sponsored with the Boston Veterans Association.

2nd Strabismus Fall Festival

Meltzer Auditorium, Mass. Eye and Ear

Course Directors: Gena Heidary, MD, PhD and Dean Cestari, MD

October 17, 2015: Designed for anyone interested in strabismus surgery including physicians, optometrists, orthoptists and trainees, this one-day CME accredited symposium (7.5 *AMA PRA Category 1 Credits ™*) discusses the evaluation and management of common and advanced strabismus cases using a case-based approach. The Robb-Petersen guest lecturer for this event is Kenneth Wright, MD, Clinical Professor of Ophthalmology at University of Southern California Keck School of Medicine, and Director of the Wright Foundation for Pediatric Ophthalmology & Strabismus. Registration will be required and opens mid-summer. CME

Awards & Grants and Other Honors

Senior postdoctoral fellow in the Laboratory for Visual Neuroplasticity at Schepens/Mass. Eye and Ear **Corinna Bauer, PhD** was awarded $60,000 as the recipient of the 2015-2016 Knights Templar Eye Foundation Career Starter Grant in support of her project, "Using Advanced Neuroimaging to Characterize Abnormal Brain Development in Cortical/Cerebral Visual Impairment: Finding Clues for Future Rehabilitation Strategies."

Petr Baranov, MD, PhD has been awarded the Alice J. Adler Shore Fellowship of Schepens Eye Research Institute. Dr. Baranov's research interests focus on the treatment of retinal degenerative disorders through cell therapy and neuroprotection.

Schepens/Mass. Eye and Ear researcher **Sunil Chauhan, PhD** received a new R01 grant totaling $2.46 million over five years for his project, "Ocular Immune Regulation by Mesenchymal Stem Cells."

Cornea Service member and the Henry Freeman Allen Cornea Scholar at Mass. Eye and Ear **Joseph Ciolino, MD** received three years of support totaling nearly $1 million from the Department of Defense for his project, "Drug Eluting Contact Lenses: A Topical Treatment for the Prevention and Management of Ocular Wound Infections."

Reza Dana, MD, MSc, MPH, FARVO and **Kevin Houston, OD** each have been awarded $50K Curing Kids grants from Mass. Eye and Ear in support of their research projects. Dr. Dana's project is entitled, "Promotion of Corneal Transplant Survival in the Very Young," and Dr. Houston's project is "A Smart Phone App for the Objective Measurement of Strabismus."

Congratulations to our 2015-2016 Heed Fellows!

Current HMS Ophthalmology Residents:

- **Ashley Campbell, MD**
  Ophthalmic Plastic and Reconstructive Surgery, New York University (ASOPRS Combined Fellowship)
- **Aubrey Gilbert, MD, PhD**
  Pediatric Ophthalmology, Boston Children's Hospital/Mass. Eye and Ear
- **David Sola-Del Valle, MD**
  Glaucoma, Bascom Palmer Eye Institute

Current Mass. Eye and Ear Uveitis Fellow:

- **Victoria Chang, MD**
  Cornea, Bascom Palmer Eye Institute

Incoming Fellows:

- **Steven Greenstein, MD**
  Cornea, Mass. Eye and Ear
- **Euna Koo, MD**
  Pediatric Ophthalmology, Boston Children's Hospital/Mass. Eye and Ear
- **Safa Rahmani, MD**
  Retina, Mass. Eye and Ear

Ilene Gipson, PhD received $177,794 from the National Institutes of Health to purchase a Leica Laser Microdissection 7000 system. Dr. Gipson is an Ocular Surface Scholar and Senior Scientist at Schepens/Mass. Eye and Ear.

Mass. Eye and Ear oculoplastics specialist **Grace Lee, MD** was inducted into the American Society of Ophthalmic Plastic and Reconstructive Surgery at the May 14-17, 2015 Spring meeting held in St. Thomas, USVI.

Alex Hwang, PhD won the Muse Award, a sub-category competition of the Wearables in Healthcare Pilot Challenge by Medstro. His idea was to use the Muse, which is a compact version of an electroencephalogram that measures electrical signals in the brain, to measure the level of visually induced motion sickness while using head mounted displays. Dr. Hwang was also one of 10 finalists invited to present at Google's Cambridge headquarters on April 23, 2015. He is a HMS Instructor of Ophthalmology and an Investigator in the Peli Laboratory at Schepens/Mass. Eye and Ear.

John Miller, MD, a senior retina fellow working with Demetrios Vavvas, MD, PhD at Mass. Eye and Ear, was one of two vitreoretinal fellows who won the 2015 Evangelos S. Gragoudas Award through the Macula Society this year. HMS alumnus Yannis Paulus, MD of Johns Hopkins and an HMS alumnus also received the award.

Mass. Eye and Ear's **Eric A. Pierce, MD, PhD, Michael Farkas, PhD** and colleagues received five years of renewed support totaling $2.94 million for their R01 grant, "The Pathogenesis of RNA Splicing Factor Retinitis Pigmentosa."

Each year, the American Glaucoma Society holds a surgical video competition, and the top 4-5 video finalists show their videos at the surgical video symposium during the annual meeting. **Lucy Shen, MD** and her video submission, "A Bleb Full of Repairs," received First Prize. This is the second time she has won this award.

Demetrios Vavvas, MD, PhD received four years of support totaling $1.48 million for his new R01 grant, "Necroptosis, Neuroprotection and Axonal Regeneration in Retina Ganglion Cell Injury."

Personnel Updates

HMS Appointments

Joseph Arboleda-Velasquez, MD, PhD
Assistant Professor of Ophthalmology
Schepens /Mass. Eye and Ear

Daejoon (Alex) Hwang, PhD
Instructor in Ophthalmology
Schepens /Mass. Eye and Ear

Kameran Lashkari, MD
Assistant Professor of Ophthalmology, Part-time
Schepens /Mass. Eye and Ear

Personnel Changes

In addition to seeing patients one day a week at Spaulding Rehabilitation Hospital in Boston and Cape Cod, **Kevin Houston, OD** will be seeing patients in the Vision Rehabilitation Service at Mass. Eye and Ear, beginning in June 2015. Dr. Houston remains dedicated to developing and testing optical devices and therapies for patients with hemianopia and hemispatial neglect, two common and debilitating visual consequences of brain injury.

Leadership Appointments

Amy Watts, OD, Director of the Vision Rehabilitation Service, Mass. Eye and Ear

Simmons Lessell, MD, Faculty and Trainee Development Advisor, HMS Ophthalmology

New Recruits

After finishing up her final year of residency in HMS Ophthalmology, **Catherine Choi, MD** will transition to a position as Clinical Research Fellow in Ophthalmic Plastic Surgery at Mass. Eye and Ear while she also serves as an attending in the Emergency Department, provides Trauma Service coverage, and teaches in the surgical training laboratory. Dr. Choi joined the HMS Ophthalmology residency program as a graduate of Harvard Medical School, where she earned her MD. Prior to that, she earned both her BA and MSc with General and Departmental honors in Neuroscience at Johns Hopkins University.

After completing a medical retina

fellowship at the University of Iowa as a Heed Fellow, **Rachel Huckfeldt, MD, PhD** will begin a year-long fellowship in inherited retinal disease in July 2015 with Dr. Eric Pierce at Mass. Eye and Ear. Dr. Huckfeldt has received funding from a Foundation Fighting Blindness Clinical/ Research Fellowship Award and will be developing a medical retina practice in addition to conducting research. In particular, she will serve on Mass. Eye and Ear's Retina and Electroretinography Services. Dr. Huckfeldt earned her MD/ PhD from Washington University in St. Louis, completed an ophthalmology residency in the HMS Department of Ophthalmology and was selected to attend the 2012 Heed Resident's Retreat. She went on to complete a research fellowship at Scheie Eye Institute/ University of Pennsylvania, where she has worked in the inherited retinal degenerations laboratory of Dr. Jean Bennett, studying the therapeutic applications of optogenetics.

Chief Resident and Director of Mass. Eye and Ear's Trauma Service for AY 2014-15, **Alice Lorch, MD** will join the Comprehensive Ophthalmology and Cataract Consultation Service at Mass. Eye and Ear part-time in July 2015 while pursuing coursework toward a degree in public health. Dr. Lorch completed her medical training at HMS. Prior to her ophthalmology residency at HMS, she worked in rural Guatamalan medical clinics and conducted research in pediatric health outcomes in Chile.

Robert M. Mallery, MD will join Brigham and Women's (BWH) Department of Neurology in July 2015 as well as provide services for two sessions per week to Mass. Eye and Ear's Neuro-Ophthalmology Service. Dr. Mallery earned his MD from Washington University School of Medicine and a master's degree in biomedical sciences from Washington University. He completed a neurology residency at BWH/Massachusetts General Hospital and a neuro-ophthalmology fellowship at the University of Pennsylvania and Children's Hospital of Philadelphia. He is currently visiting faculty in the Department of Ophthalmology at the University of Iowa and completing a one-year fellowship under the mentorship of Dr. Randy H. Kardon. Dr. Mallery is married to Rachel Huckfeldt, MD, PhD.

Departures

Photo credit: Pierce Harmon

Kathryn Colby, MD, PhD will be leaving the Department in July 2015 to become Chair of the Department of Ophthalmology and Visual Science at the University of Chicago. Dr. Colby's HMS roots date back to 1993 when she joined the Department as a trainee. She went on to serve as Chief Resident before honing her subspecialty training with a Cornea fellowship. During her 22-year tenure, Dr. Colby has made innumerable contributions to the Department while building a successful clinical and surgical practice in the Mass. Eye and Ear Cornea Service, as well as a reputation as a world-class corneal scientist, surgeon, and scholar. Among her accomplishments, Dr. Colby has led research and clinical trials on important corneal diseases, such as Fuchs' dystrophy and conjunctival melanoma, played a key role in the implantable miniature telescope, and improved the success of our KPro surgical efforts. In our Department, she has directed the Joint Clinical Research Center, the Annual Meeting and Alumni Reunion, and the Cornea Fellowship program. She also was the driving force behind the establishment of the Mariana D. Mead Lectureship. More recently, she founded the Pediatric Cornea Service at Boston Children's Hospital and co-founded the HMS Ophthalmology Ocular Oncology Center of Excellence. A diligent academician, Dr. Colby leaves behind a legacy of mentorship having trained numerous medical students, residents, and fellows.

Pedram Hamrah, MD will move his cornea practice and research to Tufts Medical Center beginning July 1, 2015. Dr. Hamrah has built a busy practice at Mass. Eye and Ear in corneal subspecialty

Deborah Pavan-Langston Retiring after a Five-Decade Career

Harvard Medicine School (HMS) Professor of Ophthalmology and Mass. Eye and Ear Cornea Service member **Deborah Pavan-Langston, MD, FACS** retires in June 2015.

Dr. Langston received her medical training from Cornell University Medical College before completing a research fellowship in Ophthalmology at HMS. In 1966, she became the first woman to be accepted into the HMS Ophthalmology residency program. She went on to become the first woman to take part in a Cornea fellowship at Mass. Eye and Ear, working under the expert guidance of Claes Dohlman, MD, PhD. With additional training in ocular virology and uveitis, she joined the Department in 1971, and two years later, was appointed the first woman director of Mass. Eye and Ear's Cornea and External Disease Service. She attained the rank of Professor in 2009.

Internationally renowned as an authority in ocular herpetic disease, Dr. Langston has made seminal contributions to the Department and to the broader field of ophthalmology through clinical care, research, and teaching. Her clinical and laboratory research led to a deeper understanding of herpetic diseases of the anterior segment and greatly improved patient care. She was the first to report on many related diseases and treatments and her data contributed to the FDA approval of three drugs for the treatment of blinding corneal herpetic disease. A prolific scholar and dedicated teacher, she has contributed to more than 250 original articles, reports, chapters, and books, and is the sole author of the textbook, *The Manual of Ocular Diagnosis and Therapy*, which is one of the most widely read ophthalmic texts in the world. Her expertise has been sought prominently in national and international health policy for the treatment of ophthalmic disease. She has held numerous leadership positions, including as a former chair of the FDA Ophthalmic Drug Advisory Committee and as a member of the President's Commission on Bioterrorism Preparedness and Response Committee at the Center for Disease Control and Prevention.

Throughout her distinguished career, Dr. Langston has received several of the highest awards given in ophthalmology, including the Castroviejo Medal for Outstanding Contributions to the Field of Corneal and Anterior Segment Disease (American Academy of Ophthalmology) and the Phillips Thygeson Plaque and Lecture (Ocular Microbiology & Immunology Group). In 2008, she delivered the Mariana Mead Lecture, in which she recounted her early years as a trainee at Mass. Eye and Ear. She will present this lecture, entitled "From None to One to Many," at the 2015 HMS Ophthalmology Alumni Reunion, which will be held on May 30, 2015.

care and clinical research. As a clinician scientist, he has used live imaging to elucidate molecular and cellular mechanisms in corneal immunology, neuro-immunology, and inflammation. He will continue to collaborate on research studies that were initiated at Mass. Eye and Ear.

Mary Lou Jackson, MD has accepted the position of Director of Vision Rehabilitation for the University of British Columbia Department of Ophthalmology and Visual Sciences in Vancouver, British Columbia and departed in May 2015. Dr. Jackson joined the Department in 2006 as the Director of Mass. Eye and Ear's Vision Rehabilitation Service, shaping it into a patient-centered program staffed and supported by a team of optometrists, occupational therapists, and social workers. In addition to helping thousands of patients and their families benefit from comprehensive vision rehabilitation, Dr. Jackson and her team have oriented residents and fellows to this important aspect of the field and have developed useful tools and studies that help clinicians understand the impact of advanced vision loss on patients. During her tenure, she also co-directed the HMS Ophthalmology Mobility Enhancement and Vision Rehabilitation Center of Excellence.

SEND US YOUR NEWS!
Please forward news, comments, and mailing changes to eyenews@meei.harvard.edu

First Laser-Vision Correction Surgery with New Wavelight Laser

Roberto Pineda II, MD recently performed Mass. Eye and Ear's first laser-vision correction surgery with the new Alcon Wavelight EX500 Excimer Laser, the world's fastest and most powerful excimer laser. Dr. Pineda, Ula Jurkunas, MD, and several technicians have completed training on this laser, and more certification training sessions will be held in the near future for community physicians and technicians at Mass. Eye and Ear.

Outreach

In early March 2015, **Roberto Pineda II, MD** and **Ankoor Shah, MD, PhD** led the Department of Ophthalmology's second visit of the Office of Global Surgery and Health to Uganda's Mbarara University and Referral Hospital Eye Centre and Ruharo Eye Centre, with a focus on cornea and pediatric ophthalmology.

Mass. Eye and Ear's **Yan Jiang, OD, PhD** led a free vision clinic for students taking part in the Year Up Boston Program, which gives young adults from underserved communities the tools required to plan their career and to thrive in a business environment. The Longwood Team held another screening in May. Mass. Eye and Ear staff performed this service as part of the hospital's community benefits plan.

Alumni News

In March 2015, Cleveland Clinic Abu Dhabi started accepting patients, and the medical campus on Al Maryah Island opened its eye clinic. **Scott D. Smith, MD** (HMS Ophthalmology residency class of 1994) serves as Chief of the Eye Institute at the hospital, and Sam Navon, MD (HMS Ophthalmology residency class of 1993 and a Mass. Eye and Ear fellow, class of 1995) works at Cleveland Clinic Abu Dhabi.

Visit the HMS Ophthalmology Website

As a vital part of building brand awareness and visibility, the HMS Department of Ophthalmology Communications group maintains an intradepartmental public website. The website is designed to promote our clinical, research and teaching activities, with emphasis on collaborative efforts ongoing in our Centers of Excellence and Institutes.

Communicating our efforts and accomplishments to multiple audiences (ophthalmology community, patients, researchers, prospective trainees, industry, supporters and alumni) and creating awareness of our work on a broader scale is critical to our progress. The interface—with its simple, crisp design—showcases the Department's unity while providing users with an enhanced browsing experience across multiple devices.

eye.hms.harvard.edu

Feedback? Wendy Chao (Wendy_Chao@meei.harvard.edu) or Suzanne Ward (Suzanne_Ward@meei.harvard.edu).

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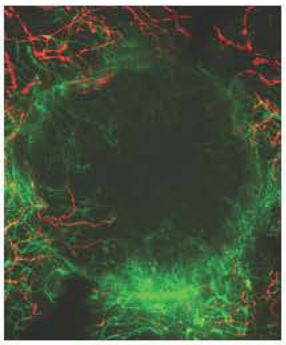
HMS Department of Ophthalmology Special Events



Blood and lymphatic vessels in the cornea after transplantation. (Credit: Takenori Inomata, MD, PhD)

29th Biennial Cornea Conference

Starr Center, Schepens Eye Research Institute

Course Directors: Reza Dana, MD, MSc, MPH, FARVO and James Chodosh, MD, MPH

October 16-17, 2015

See page 11 for details

Strabismus Fall Festival

Meltzer Auditorium at Mass. Eye and Ear

Course Directors: Gena Heidary, MD, PhD and Dean Cestari, MD

October 17, 2015

See page 12 for details

Save the Date: June 10-12, 2016 for the HMS Ophthalmology Annual Meeting and Alumni Reunion