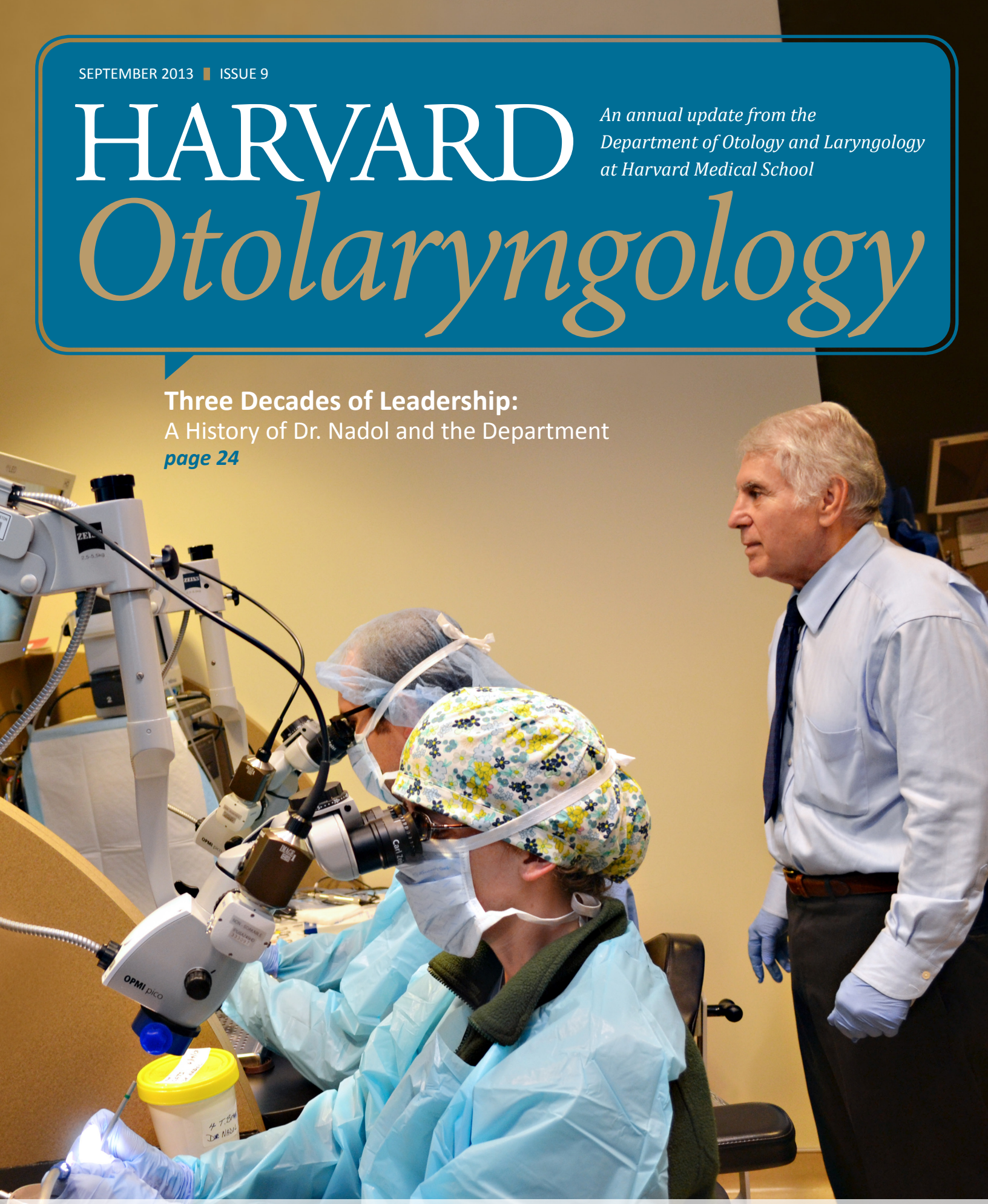
SEPTEMBER 2013 | ISSUE 9

HARVARD Otolaryngology

An annual update from the Department of Otology and Laryngology at Harvard Medical School

Three Decades of Leadership:
A History of Dr. Nadol and the Department

page 24



HARVARD Otolaryngology

An annual update from the Department of Otology and Laryngology at Harvard Medical School

On the cover: Residents Drs. Josh Meier and Megan Abbott perform stapedectomies in the training lab with Dr. Nadol.

Below: Dr. Robin Lindsay directs a midface plating course.

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An annual update from the Department of Otology and Laryngology at Harvard Medical School.

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SEPTEMBER 2013 ▮ ISSUE 9

Joseph B. Nadol, Jr., M.D.

Walter Augustus LeCompte Professor
Department of Otology and Laryngology
Harvard Medical School

Chief and Chairman
Department of Otolaryngology
Massachusetts Eye and Ear Infirmary
Massachusetts General Hospital

Dear Readers,

In this issue of *Harvard Otolaryngology,* we celebrate what has been accomplished this year, both individually and collectively, in the Department of Otology and Laryngology at Harvard Medical School. Our clinical venues continue to evolve at Beth Israel Deaconess Medical Center, Boston Children's Hospital, Brigham and Women's Hospital, Massachusetts General Hospital, and Massachusetts Eye and Ear Infirmary, united in our mission to promote excellence in clinical care, research, and teaching in the field of otolaryngology.

As we turn our focus to the future, the search committee continues to work toward selecting my successor as Chief of the Department of Otolaryngology at Massachusetts Eye and Ear Infirmary and Chairman of the Department of Otology and Laryngology at Harvard Medical School. Once our new leader has been identified and arrives, I will continue to practice otology, while devoting much of my time to research. I am excited to remain part of this extraordinary community. This is an exciting time of change and transition, and I'm grateful for your continued support.

I am pleased to look back at the remarkable accomplishments of the Department and to celebrate those that transpired over the past year in this issue. With gratitude, I thank Dr. Gray for her editorial on educational activities, and Drs. Frankenthaler, Cunningham, and Shapiro for providing updates of ongoing activity in otolaryngology services at Beth Israel Deaconess Medical Center, Boston Children's Hospital, and Brigham and Women's Hospital.

In the pages that follow, you will find news from every corner of the Department, along with updates on faculty promotions, our latest graduation ceremony for the class of 2013, the department's 1st annual meeting, and news from our alumni of the program. Dr. Herbert Silverstein, of the Harvard Otolaryngology class of 1966, is profiled.

This time is especially meaningful to me, as we move forward into another academic year and prepare to transition to a new administration. Thank you for your interest in and support of the Department's activities.

Sincerely,

Joseph B. Nadol, Jr.

News from
Beth Israel Deaconess Medical Center

by Robert A. Frankenthaler, M.D.

Robert A. Frankenthaler, M.D.
Chief of Otolaryngology,
Beth Israel Deaconess Medical Center

The Division of Otolaryngology-Head and Neck Surgery at Beth Israel Deaconess Medical Center (BIDMC) has worked tirelessly to develop a center for comprehensive, leading-edge patient care.

The division has experienced great successes this year; however, we were also presented with difficult challenges. While we successfully expanded services, broadened research, increased patient volume, and welcomed new staff members, we were also confronted with the extraordinary events of the marathon bombings. Our faculty and staff cared for 24 bombing victims. **Selena Heman-Ackah, M.D., M.B.A.,** Medical Director of Otology, Neurotology, and Audiology, and her team provided exceptional care to patients who experienced perforated eardrums and/or hearing loss as a result of the blasts. BIDMC's incredible response to the events highlights our commitment to patient care and has brought our community closer together. The teamwork, clinical excellence, and humanity I witnessed firsthand made me even more proud to be part of BIDMC.

Our fellowship-trained neurotologist **Dr. Heman-Ackah** has built a busy clinical practice that provides treatments for a wide range of otologic and neurotologic disorders. She has also made an impact by forming partnerships throughout the BIDMC and Harvard networks. Most recently she partnered with otolaryngologist Dennis S. Poe, M.D., from Boston Children's Hospital, and neurosurgeon Nirav J. Patel, M.D., from Boston Medical Center, to build upon the otology, neurotology, and skull-based services offered at BIDMC.

This year we recruited two exceptional audiologists to our team—**Lydia Colón, Au. D.,** and **Lydia Gregoret, Au. D., Ph.D.** Dr. Colón joined the practice in March and has a special interest in cochlear implantation. She received her Doctor of Audiology degree from Gallaudet University in Washington, D.C., and completed a clinical fellowship in audiology at Mayo Clinic in Scottsdale, AZ. Dr. Gregoret completed her Ph.D. in chemistry at the University of California, San Francisco and served as an Associate Professor of Chemistry and Biochemistry at the University of California, Santa Cruz prior to her training in audiology. She completed her Doctor of Audiology degree this past spring at Northeastern University in Boston and will join the practice in September. Together the audiology team will expand its range of care, including the launch of a new cochlear implantation program.

Laryngologist **Pavan S. Mallur, M.D.,** continues to build a comprehensive clinical practice with a focus on voice, swallowing, and airway disorders. Dr. Mallur provides state-of-the-art treatments for benign vocal fold lesions, vocal fold paralysis, and dysphagia, among other conditions. Dr. Mallur works closely with BIDMC's Division of Thoracic Surgery and Interventional Pulmonology to provide treatment for patients with dynamic and static laryngeal obstruction in the setting of pulmonary disease. In the past year, his research has focused on outcomes of KTP-laser treatment for Reinke's edema and new technologies for laryngeal applications.

The division continues its commitment to research. Consequently, we continue to conduct clinical and outcomes research in the areas of cochlear implantation, vocal fold paralysis, salivary gland malignancies, and nasal obstruction and anosmia.

Our faculty also remains actively involved in educating our residents. **David S. Caradonna, M.D., D.M.D.,** who leads our rhinology services, continues to serve as the BIDMC Site Director for the Harvard Otolaryngology Residency Program, and in that role mentors trainees during their rotations. Dr. Caradonna was recently appointed to Medical Director of the Division of Dentistry and Oral Surgery and plans to develop a clinical center for nasal and sinus disorders in the near future. He remains interested in studying sinonasal disease processes, such as rhinosinusitis. ●

Portrait photography courtesy of Beth Israel Deaconess Medical Center.
Left: Dr. Frankenthaler in the operating room.
Above inset: Dr. Heman-Ackah performs tympanoplasty surgery.

Michael J. Cunningham, M.D.
Otolaryngologist-in-Chief,
Boston Children's Hospital

News from Boston Children's Hospital

by Michael J. Cunningham, M.D.

In last year's update, we reported on the educational activities of our faculty members in the Department of Otolaryngology and Communication Enhancement here at Boston Children's Hospital. I thought it fitting, in the final year of Dr. Joseph Nadol's career as our Department of Otology and Laryngology Chair, to highlight our faculty's research accomplishments.

Looking back at the year, a total of 79 peer-reviewed articles, 48 chapters, 7 books, 79 national and international presentations, and 33 grants were achieved. This level of productivity is competitive with many non-clinical academic university health sciences departments. Some notable examples of individual work and professional recognition are outlined below:

Margaret Kenna, M.D., and **Gabriel Corfas, Ph.D.,** serve as co-chairs of the department's research committee. In doing so, they foster many of the academic projects conducted by our fellows and attending staff.

Dr. Kenna also serves as the principal investigator for an NIDCD/NIH study assessing the audiological and genetic resources available for children with sensorineural hearing loss. She has also applied for an NIDCD grant to host an international symposium on Usher syndrome. At the local level, she serves on the Harvard Medical School Subcommittee of Professors and continues to teach in the HMS Leadership Development Course for Physicians and Scientists.

Dr. Corfas published in the journal *Science* his novel work demonstrating how social deprivation impairs myelin maturation within the central nervous system. His lab is now investigating how this process relates to the auditory system and the implications for congenital deafness. An additional investigative focus of his lab is the effect of noise-induced trauma on cochlear function, specifically synaptic loss, and the potential preventative or reparative role of neurotrophic factors.

Jeff Holt, Ph.D., and **Gwen Geleoc, Ph.D.,** jointly published a landmark article in the journal *Neuron*, identifying TMC 1 and TMC 2 as critical components of the hair cell transduction channel. They have presented this work internationally in the United Kingdom, Switzerland, and Germany, as well as nationally at Brown, Columbia, Johns Hopkins, Rutgers, and Stanford. They were both awarded independent NIH (R01) grants this year, which will support their investigative work over the next five years.

Trevor McGill, M.D., delivered the keynote John Evans lecture at the annual meeting of the British Otolaryngologic Association in Sheffield, England last fall. The title of his dissertation was "Pediatric Otolaryngology in the Colonies." He was additionally the recipient of the 2012 Boston Children's Hospital Alumni Association Distinguished Service Award.

Reza Rahbar, D.M.D., M.D., was a Visiting Professor at McGill University in Montreal, Canada and a guest speaker at the International ORL Congress in Riyadh, Saudi Arabia. His research focuses on the implementation of several airway SCAMPs (Standardized Clinical Assessment Management Plans) within the department and across our institution.

David Roberson, M.D., is President of the Global Tracheotomy Collaborative, which focuses on enhancing the world-wide care of patients with tracheotomies. He also serves as co-chair of the AAO-HNS Patient Safety and Quality Improvement Committee. He mentors multiple fellows, residents, and otolaryngology colleagues in quality

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Photograph courtesy of Boston Children's Hospital

Boston Children's Hospital Department of Otolaryngology and Communication Enhancement Annual Retreat, January 2013.
First row: Drs. Volk, Cunningham, Rahbar, and McGill
Second row: Drs. Licameli, Ohlms, Holt, and Lee
Third row: Drs. Shane, Kenna, Watters, Brodsky, and Corfas
Fourth row: Drs. Roberson, Poe, Whittemore, and Nuss

care projects within and outside of the department. For his commitment to education, he received the Trevor McGill Teaching Award from our fellows this past academic year.

Dennis Poe, M.D., was a guest speaker at the Royal Society of Medicine in London, England this past December, presenting on "Eustachian Tube Interventions: Do They Work?" He was also elected a corresponding member of the German Society of ORL-HNS.

Greg Licameli, M.D., published a paper on the long-term surgical outcomes of adenotonsillectomy for PFAPA in *JAMA Archives* this past year. He was one of several representatives from the department participating in the 2013 Northeast Cochlear Implant Conference. He also published a textbook, *Pediatric ORL: Diagnosis and Treatment,* which he co-edited with Dr. David Tunkel.

Roger Nuss, M.D., has established an academic educational relationship between the department and the otolaryngology department at the National University teaching hospital in Kigali, Rwanda. He is working closely with Dr. Mack Cheney and the MEEI Office of Global Surgery and Health on this endeavor.

Mark Volk, D.M.D., M.D., continues his focus on medical simulation both within and outside of the department. He has helped initiate simulation programs this past year at the Connecticut Children's Hospital, the Loyola University ORL Department, and the Starship Children's Hospital in Auckland, NZ.

Kenneth Whittemore, Jr., M.D., M.S., continues his academic focus on otology with presentations at both the 2013 American Society of Pediatric Otolaryngology (ASPO) and the 2012 Society for Ear, Nose and Throat Advances in Children (SENTAC) meetings.

Laurie Ohlms, M.D., is working with members of our audiology group as well as physicians in the BCH dermatology department on a project focusing on the otologic manifestations of icthyosis.

Gi-Soo Lee, M.D., continues his work with Dr. Volk on an iPad-based electronic textbook for surgical skills instruction. He additionally has been serving as the department liaison to the Center for Pediatric Sleep Disorders here at Children's.

Karen Watters, M.D., works with Dr. Rahbar on the Airway SCAMPs project and with Dr. Roberson as our site coordinator for the Global Tracheotomy Collaborative.

Jacob Brodsky, M.D., oversees our relatively new Balance and Vestibular Program. He has lectured in Massachusetts, Maine, and Delaware on this subject. He has published on the brainstem effects of vestibular migraine, and currently studies the effects of vestibular migraine on the peripheral vestibular system in children.

Eelam Adil, M.D., is our newest faculty member. She is one of four excellent physicians, along with Drs. Jonathan Sherman, Steven Newton and Ryan Murray, who trained in our fellowship program and graduated in 2013. Dr. Adil's clinical research will be in the field of pediatric rhinology, specifically focusing on the cystic fibrosis population.

Our Center for Communication Enhancement, under the leadership of **Howard Shane, Ph.D.,** has maintained its reputation for academic excellence. Dr. Shane continues his focus on the role of augmentative communication in children with autism. He recently received a grant from CVS Caremark to investigate teletherapy in this respect. He and **Brian Fligor, ScD, CCC-A** are jointly developing an EMR compatible iPad-based audiogram documentation system.

Dr. Fligor also continues his research on progeria-associated hearing loss, as well as his clinical interests in noise-induced hearing loss and tinnitus.

Marilyn Neault, Ph.D., served as program chair for the Northeast Cochlear Implant Conference. Dr. Neault also serves as chair of the Cochlear Implant Specialty Certification Committee of the American Board of Audiology.

John Costello, M.A., CCC-SLP, represented the department at several international augmentative communication forums in Israel, France, Ireland, Hong Kong, Norway, and Italy. He continues to work on message banking for individuals with ALS and other neurodegenerative disorders, as well as emphasizing the role of augmentative communication in the pediatric hospital environment.

Geri Harvey Woodnorth, M.A., CCC-SLP, oversaw five presentations and one publication by her speech-language pathology group.

Terrell Clark, Ph.D., continues to oversee the Deaf and Hard of Hearing Program, which offers several educational seminars and community programs on an annual basis.

Guangwei Zhou, ScD, CCC-A co-directs our Balance and Vestibular Disorders Program with Dr. Brodsky. He was also the lead author on a study with Dr. Poe and Dr. Quinton Gopen, assessing the clinical use of vestibular evoked potentials.

This year I had the honor of representing the department as a Visiting Professor at both the University of Minnesota and Wake Forest University, as well as being the graduation speaker at Stanford University. I celebrated with Dr. Jennifer Shin, one of my past fellows and a current BWH colleague, the recent publication of our textbook, *Otolaryngology: Prep and Practice.* I continue to work with several of the Harvard residents, currently Dr. Ahmad Sedaghat and Dr. Matthew Mori, on research projects focusing on rhinosinusitis and juvenile nasopharyngeal angiofibroma.

A strong focus on academic achievement, combined with the practice of exemplary clinical care and a commitment to resident and fellow education, has been the hallmark of the Department of Otology and Laryngology under Dr. Nadol's leadership. I speak for all my colleagues at Children's Hospital in expressing our gratitude for his past support and guidance. We look forward to a bright future based on the foundation he has established. ●

News from Brigham and Women's Hospital

by Jo Shapiro, M.D.

Photograph by Pamela Galowitz

Jo Shapiro, M.D.
Division Chief, Otolaryngology,
Brigham and Women's Hospital

The Division of Otolaryngology at Brigham and Women's Hospital has been working in collaboration with hospital leadership to improve the quality and safety of patient care and to maintain the high standards of professionalism across the institution. In addition to having the pleasure of being part of the Harvard Otolaryngology Residency Program, we continue to be a major teaching site for Harvard Medical School students. Our faculty also provides preceptorship for various trainees, including general surgery interns, primary care medicine residents, allergy/immunology fellows, and oral medicine residents.

Donald J. Annino, Jr., M.D., D.M.D., is an integral part of the hospital's nationally renowned facial transplant team, having participated in every facial transplant surgery at BWH. He works collaboratively in clinical, teaching, and research endeavors with the Head and Neck Oncology Program, the Department of Neurosurgery in the Endoscopic Skull Base Center, the Division of Thoracic Surgery, and the Division of Plastic Surgery. He also directs our Transoral Robotic Surgery program. He has a surgical practice that includes head and neck cancer surgery, reconstructive surgery, and anterior skull base surgery.

Neil Bhattacharyya, M.D., Associate Division Chief, has published numerous studies on the diagnosis and treatment of acute and chronic sinusitis in addition to outcomes research for other diseases, such as papillary thyroid cancer and sinus cancer. He plays a national role in developing evidence-based guidelines for otolaryngology. He is an associate editor for *Otolaryngology–Head and Neck Surgery,* and serves on the editorial boards for multiple publications, including *The Laryngoscope* and the *American Journal of Rhinology.* This year he mentored residents in their research presented at the Triological Society combined meetings. They went on to receive the William W. Montgomery, M.D. resident research award, the Shirley Baron resident research award, and the John J. Conley, MD resident research award. He maintains a busy clinical practice in rhinology, laryngology, and sleep apnea.

Jayme R. Dowdall, M.D., works with interdisciplinary teams to address voice, airway, and swallowing disorders both within our field and across specialties. She has a special interest in patient-centered translational research. She has developed office-based laryngology procedures at BWH that are now routine. Her work on a new multi-disciplinary protocol for bedside vocal fold injections in the Thoracic ICU setting was showcased at the recent BWH annual clinical innovation day. She also developed the medical student curriculum for a new two week ORL rotation for third year students at HMS. She is the new BWH site director for the Harvard Otolaryngology Residency Program.

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Laura A. Goguen, M.D., continues to contribute clinically and academically to the advancement of the Dana-Farber (DFCI) Head and Neck Cancer Program. She undertakes a high volume of complex ablative head and neck surgeries. She has published numerous clinical protocols for head and neck cancer management. Her current research focuses on neck management in head and neck cancer as well as dysphagia following head and neck cancer treatment. She presented a manuscript on dysphagia at the Triological Society Combined Sections Meeting that was also accepted for publication this past year.

Daniel J. Lee, M.D., practices neurotology at BWH and MEEI. He is a valued contributor to our division by taking care of our patients needing otologic or neurotologic management in collaboration with the Department of Neurosurgery at BWH.

Charles M. Norris, Jr., M.D., is the surgical director of the DFCI–BWH Head and Neck Oncology program, where he continues his involvement in the clinical, research, and teaching enterprises. He is one of the most valued educators in our department. He recently helped to recruit a new medical oncologist and radiation oncologist to the head and neck program. He has also been instrumental in providing funding support for three researchers at DFCI.

Jo Shapiro, M.D., dedicates much of her time as a clinician educator. She serves as a senior examiner for the boards on the American Board of Otolaryngology Education Council and she was recently selected as a member of the Ethics and Professionalism Committee (EPCOM) for the American Board of Medical Specialties (ABMS). She also directs the Center for Professionalism and Peer Support at BWH and continues to speak both nationally and internationally about the center, including talks most recently at the University Medical Center Groningen in the Netherlands and as a graduation speaker at Oregon Health Systems University's Department of Otolaryngology–Head and Neck Surgery. Her current interests at BWH include: professionalism in giving difficult feedback, disclosure and apology, peer support, and oropharyngeal dysphagia.

Jennifer J. Shin, M.D., is a nationally recognized expert in evidenced-based practice and is the lead editor of *Evidence-Based Otolaryngology,* an internationally cited textbook that entered its second printing in 2010. She serves as the associate editor for clinical epidemiology and outcomes research for *Otolaryngology–Head and Neck Surgery,* and has authored an invited series on the topic. Along with Dr. Cunningham, she is the co-editor of *Otolaryngology Prep and Practice,* which debuted this year.

Photograph by Larry Franklin Maglott

Dr. Rachel Roditi, a recent recruit to the BWH general otolaryngology practice.

Tom Thomas, M.D., M.P.H., was appointed Associate Director of our new Transoral Robotic Surgery program, joining Dr. Annino in further developing our robotic surgery program to offer patients the opportunity to undergo a minimally invasive resection of head and neck tumors.

Sepi Gilani, M.D., Anthony Prince, M.D., and **Rachel Roditi, M.D.** were recently recruited as general otolaryngology full-time faculty. They will be working the main BWH campus, as well as the new practices at Foxboro and Faulkner.

Our division is enhanced by a team of committed professionals who all provide excellent patient care. **Sara Springer, Au.D, CCC-A,** leads our Audiology service, **Peg Toro, Au.D, CCC-A,** directs the newborn hearing screening program, and **P.J. Su, CCC-SLP,** leads the team that provides speech and swallowing evaluation and treatment for the entire inpatient and outpatient population at BWH and DFCI.

We have an extraordinarily committed group of talented staff, and we are working closely together to develop creative processes and solutions to the upcoming changes anticipated for health care. Our whole team continues to maintain a supportive and collegial environment.

News from Massachusetts Eye and Ear Infirmary

by Joseph B. Nadol, Jr., M.D.

Joseph B. Nadol, Jr., M.D.
Chief and Chairman, Otolaryngology
Massachusetts Eye and Ear Infirmary
Massachusetts General Hospital

As sponsoring institution of the Harvard Otolaryngology Residency Program, the Department of Otolaryngology at Massachusetts Eye and Ear Infirmary continues to honor its commitment to delivering excellence in clinical care, research, and teaching. Our physicians and scientists are proud to serve as mentors to future leaders in otolaryngology.

Our commitment to training future leaders in the field is not only seen in our educational efforts, as described by Program Director Dr. Stacey Gray in her editorial [on page 32], but also in the department's continuing efforts to grow and succeed.

Since our last issue, the department has expanded by promoting three researchers in the area of hearing and deafness to full-time faculty members. We also look forward to welcoming a new physician in 2014.

An exciting milestone in our educational efforts, construction on our new state-of-the-art otolaryngology surgical training laboratory (pictured above) was completed early this year. The multidisciplinary training laboratory allows for advanced instruction capabilities in nearly every subspecialty of otolaryngology and will serve as a resource for our residents and fellows, as well as experienced surgeons in continuing medical education.

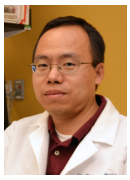
With the opening of Massachusetts Eye and Ear, Longwood, we now offer otolaryngology surgical care in the new center that is home to four operating rooms and an advanced surgical center.

Just as our facilities and resources continue to grow, so do our physicians and scientists, who continue to develop themselves as experts in their subspecialties on the international stage through clinical care, grant funding, awards, scholarly work, and public outreach.

New Faculty

This year we welcome three new full-time research faculty members to our main campus.

Mitchell Day, Ph.D., has been appointed as an Instructor of Otology and Laryngology at Harvard Medical School. Previously a Senior Research Fellow mentored by Bertrand Delgutte, Ph.D., Dr. Day's research focuses on understanding the neural circuits in the brain that underlie the ability to localize sound sources.



Mingqian Huang, Ph.D., has been appointed as an Instructor of Otology and Laryngology at Harvard Medical School. Dr. Huang previously worked as a Senior Research Fellow for Zheng-Yi Chen, Ph.D., studying hearing and deafness by investigating hair cells in the zebrafish model.

Albena Kantardzhieva, Ph.D., has been appointed as an Instructor of Otology and Laryngology at Harvard Medical School. Dr. Kantardzhieva previously worked with William Sewell, Ph.D., as a Senior Research Fellow. Her current research seeks to advance current knowledge of factors involved in hearing loss and protection.

Additionally, we welcome a new physician who will join our department in 2014. **John Dobrowski, M.D.,** will bring his expertise in sleep medicine to the General Otolaryngology Division.

(Continued from page 13)

New Leadership

Michael McKenna, M.D., has been promoted to Director of the Division of Otology and Neurotology.

Four faculty members have been appointed to named Chair positions this year:

With the opening of the Office of Global Surgery and Health, **Mack Cheney, M.D.,** has been appointed to the newly created Steven C. and Carmella R. Kletjian Chair of Global Surgery. Dr. Cheney is the founding director of OGHS and the first incumbent of the Kletjian Chair.

Richard Gliklich, M.D., has been appointed to the newly created Leffenfield Professorship of Otology and Laryngology at Harvard Medical School. Upon his retirement, the chair will become the Laurie and Richard Gliklich Professorship.

James Rocco, M.D., Ph.D., was appointed the Daniel Miller Associate Professor of Otology and Laryngology.

John Rosowski, Ph.D., has been named the Gudrun Larsen Eliasen and Nels Eliasen Professor of Otology and Laryngology at Harvard Medical School. The late Dr. Saumil Merchant was the inaugural incumbent of the Eliasen chair. Dr. Rosowski and Dr. Merchant were close collaborators and co-directors of the Wallace Middle Ear Research Unit in the Eaton-Peabody Laboratories at Mass. Eye and Ear. Dr. Rosowski continues their research, studying the relationship between structure and function in the middle and external ear, working towards improvements in the diagnosis and surgical treatment of conductive hearing loss.

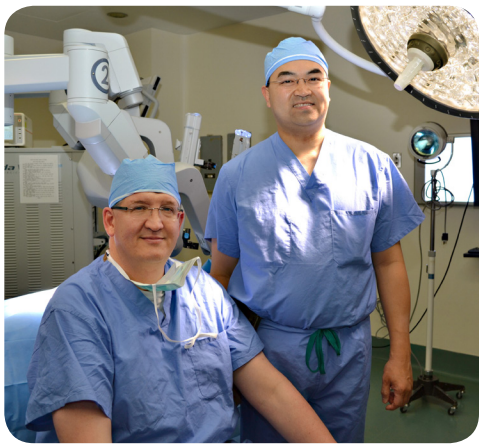
New Facilities

On April 2nd, 2013, the department celebrated the opening of our state-of-the-art Otolaryngology Surgical Training Laboratory. The laboratory will advance instruction capabilities in nearly every subspecialty of otolaryngology, including skull-base surgery, head and neck surgery, laser surgery, otology and neurotology, facial plastic and reconstructive surgery, sinus surgery, laryngology, and pediatric otolaryngology. Mass. Eye and Ear President and CEO John Fernandez announced that the laboratory—the only one of its kind and a "gold standard" in otolaryngology training—would be named the **Joseph B. Nadol, Jr., M.D., Otolaryngology Surgical Training Laboratory.**

With the opening of the Mass. Eye and Ear, Longwood location, the Department of Otolaryngology now extends to the Longwood area in a new facility featuring four operating rooms and a state-of-the-art outpatient surgical center.

New Clinical Services

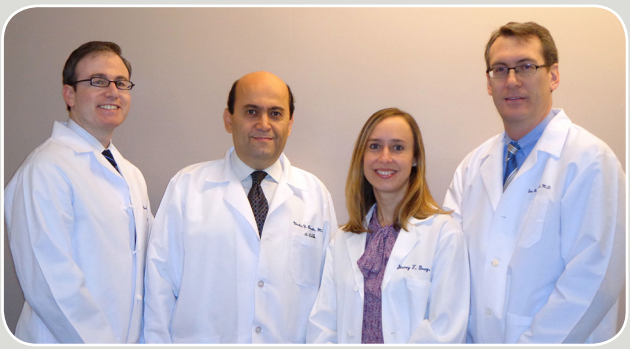
Clinical expertise in the department continues to grow, with our physicians offering specialized care and the most advanced clinical services to our patients. The department now offers transoral robotic surgery for head and neck cancer treatment in the Head and Neck Surgical Oncology Division, as well as neurolaryngology care in the Laryngology Division.



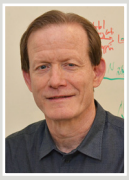
Derrick Lin, M.D., and **James Rocco, M.D., Ph.D.,** (above) have pioneered efforts toward bringing transoral robotic surgery to appropriate head and neck cancer patients at Mass. Eye and Ear. After completing a training course in 2011, Drs. Lin and Rocco now offer this treatment using facilities at Winchester Hospital, which is located in the northwest suburb of Boston.

In the Laryngology Division, **Phillip Song, M.D.,** is developing an integrated network of neurologists, voice and speech pathologists, and otolaryngologists to help patients with neurological diseases that affect voice and swallowing function.

Important Publications and Discoveries



Benjamin Bleier, M.D., Nicolas Busaba, M.D., Stacey Gray, M.D., and **Eric Holbrook, M.D.,** have co-authored a study on the effectiveness of different treatments of nosebleeds for adults. The study, published in *Otolaryngology–Head and Neck Surgery,* found that in a limited observation, surgical and/or medical intervention offered the best outcome in adults with nosebleeds.



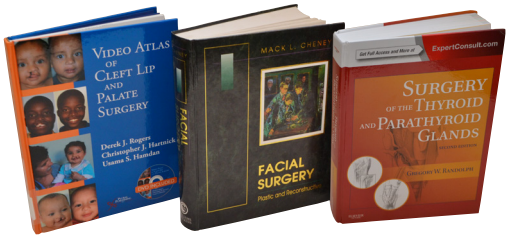
Albert Edge, Ph.D., is the lead author of a study conducted with hearing researchers at Massachusetts Eye and Ear Infirmary and Harvard Medical School who have, for the first time, regenerated sensory hair cells in the ear, resulting in restored hearing to noise-damaged ears. The Jan. 10, 2013 issue of *Neuron* features the research study, as well as a video discussion with Dr. Edge.

In a May 2013 issue of *Cancer,* investigators at Massachusetts General Hospital and Massachusetts Eye and Ear Infirmary, including **James Rocco, M.D., Ph.D., Aaron Tward, M.D., Ph.D.,** and **Edmund Mroz, Ph.D.,** describe how their measure of heterogeneity of cells within a tumor appears to predict treatment outcomes of patients and was a better predictor of survival than most traditional risk factors in a small group of patients with squamous cell carcinoma, the most common type of head and neck cancer.

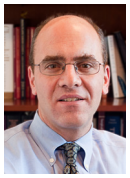
In the November 2012 issue of *Nature Biotechnology,* **Konstantina Stankovic, M.D., Ph.D.,** and a team of researchers from the Massachusetts Institute of Technology, Massachusetts Eye and Ear Infirmary, and the Harvard-MIT Division of Health Sciences and Technology demonstrate for the first time that a natural battery in the inner ear could power implantable electronic devices without impairing hearing.

New Textbooks

A number of faculty members in the department have recently published textbooks to advance education in our field:



Mack Cheney, M.D., and **Tessa Hadlock, M.D.,** are currently working on a second edition of *Facial Surgery: Plastic and Reconstructive*, to be published by Quality Medical Publishing, Inc.



Christopher Hartnick, M.D., M.S., and pediatric otolaryngology fellow **Derek Rogers, M.D.,** published their textbook, *Video Atlas of Cleft Lip and Palate Surgery*, with Plural Press in August 2013.

Gregory Randolph, M.D. published a second edition of his textbook, *Surgery of the Thyroid and Parathyroid Glands* with Saunders in 2012.

(Continued from page 15)

Awards and Honors

Daniel Deschler, M.D., was recognized in an editorial for his dedicated service as a reviewer for *The Laryngoscope.* This recognition was determined using several criteria, including at least 10 reviews performed, most review invitations accepted, a rapid average turnaround time, and a high average review quality score (given by associate editors and the editor-in-chief).

Stacey Gray, M.D., was appointed to the Skull Base Surgery and Rhinology & Allergy Education Committees of the American Academy of Otolaryngology–Head and Neck Surgery.

Christopher Halpin, Ph.D., was appointed Associate Editor of the *Journal of Speech, Language and Hearing Research.*

Paul Konowitz, M.D., was accepted as a member of the American Head and Neck Society.

M. Charles Liberman, Ph.D., received the von Békésy Medal from the Acoustical Society of America. The von Békésy Medal is presented to individuals who have made outstanding contributions to the area of psychological or physiological acoustics, as evidenced by publication of research results in professional journals or by other accomplishments in the field.

Daniel Merfeld, Ph.D. was recently named a fellow of the American Institute of Medical and Biomedical Engineering (AIMBE). Dr. Merfeld was nominated by peers and elected by the full membership into the official College of Fellows Class of 2013 for outstanding contributions that advanced the understanding of vestibular neurophysiology and that led to the development of a vestibular neuroprosthesis.

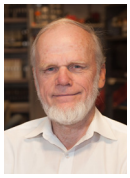
Dr. Merfeld was also awarded a US patent in 2013 for the Optical Vestibular Stimulator.

Gregory Randolph, M.D., was elected as the North American representative on the executive board of the International Federation of Otolaryngology Societies (IFOS) at the June 2013 meeting in Seoul, Korea. Dr. Randolph was also appointed as a member of the Faculty of the American College of Endocrinology, to the Executive Board of Directors of the American Thyroid Association (ATA), and to the Chair of the Endocrine Surgery Committee and Treasurer of the ATA.

Dr. Randolph also recently received certification in Neck Endocrine Surgery by the European Board of Surgery, Division of Endocrine Surgery in Berlin. He is the first US surgeon and the first ever otolaryngologist in US or Europe in the history of the EU examination to receive this honor.

Konstantina Stankovic, M.D., Ph.D., was named President-Elect of the American Auditory Society.

Research Success



Joseph C. Adams, Ph.D., received a grant award from the Capita Foundation for his project titled, "Deafness in Infants."

Albena Kantardzhieva, Ph.D., received a grant from the Ellison Foundation to study the "Rescue of Hearing following Acoustic Trauma." The grant will be used to study the role of macrophages in acoustic trauma.

Daniel Lee, M.D., received FDA approval for two clinical otologic research studies on auditory brain-stem implants for patients who are deaf and do not have have neurofibromatosis 2. The adult study was given clearance by the Human Studies Committee (IRB) of the Massachusetts Eye and Ear Infirmary and Harvard Medical School in November 2012, and a second study for pediatric patients was given clearance in May 2013.

Richard Lewis, M.D., was awarded an R01 grant from the National Institutes of Health for his project titled, "Vestibular contributions to estimated head and motion and orientation."

M. Charles Liberman, Ph.D., received a new R01 grant from the National Institutes of Health for his project titled, "Single-Neuron Marking in the Study of Abnormal Cochleas."

Jennifer Melcher, Ph.D., was awarded a new grant from the Department of Defense for her project titled, "Brain networks in tinnitus."

Daniel Polley, Ph.D., was awarded an R21 grant from the National Institutes of Health titled, "A Chemical-genetic approach to decipher the function of corticothalamic feedback." His project will characterize a new approach to remotely silence particular cell types in the brain. This could lead to new, less invasive therapies for neurological disorders characterized by pathological activity levels such as Parkinson's disease, epileptic seizure, and tinnitus.

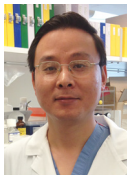
Dr. Polley was also awarded a Curing Kids Fund grant from the Infirmary for his project titled, "Waking from Hibernation: Recovery of Brain Function Following Reversible Congenital Hearing Loss," which proposes to track the recovery of brain function upon reversal of cochlear silencing in a transgenic mouse model. The proposed studies would also explore whether immersive audiomotor rehabilitative strategies can draw out further recovery of auditory function in mice that experienced temporary hearing loss either at birth or in adulthood. These studies could identify neurobiological mechanisms that shape critical periods for the efficacy of restorative therapies, such as cochlear implants, in congenitally deaf children.

Dr. Polley also received the Autifony Research Award for his project titled, "Pharmacological modulation of CNS pathophysiology following cochlear degeneration in adult mice." The main objective is to test new CNS compounds on behavioral thresholds and cortical response properties.

William Sewell, Ph.D., was awarded two new R01 grants from the National Institutes of Health. One project, "Cochlear Neurotransmitters," will study synaptic transmission between the inner hair cell and its afferent neuron. The other, "Pharmacology of Rescue from Acoustic Trauma," will take a pharmacological approach to understanding the process by which hearing loss can be prevented in the days following acoustic trauma and will lay the groundwork for a drug treatment.

Konstantina Stankovic, M.D., Ph.D., was awarded a Curing Kids Fund grant from Massachusetts Eye and Ear Infirmary in March 2013 for her project titled, "Seeing in New Light: Quantitative Polarized Light Microscopy of Unstained Pediatric Human Temporal Bones."

Dr. Stankovic also received the Nancy Sayles Day Award grant for her project entitled, "Auditory Nerve Protection: Exploring Novel Molecules."



Mingjie Tong, Ph.D., a senior postdoctoral fellow working with Dr. Albert Edge, was awarded a 2013 Seed Money Grant from the National Organization for Hearing Research Foundation to support his research.

(See spotlight story, "Study follows Boston Marathon bombing victims with ear injuries," page 19.)

Public Outreach

Tessa Hadlock, M.D., Tot Tan, M.D., Ph.D., Robin Lindsay, M.D., and fellow **Marc Hohman, M.D.,** along with Whitney Hamill, Missy Allen, and Laura Rykard, went on a medical mission to Ecuador in March 2013, operating on children born with microtia.

Ramon Franco, M.D., traveled to Tegucigalpa, Honduras in July 2013 to perform airway reconstructive surgery, to address voice problems, and to care for patients with laryngeal cancer. Dr. Franco serves as a mentor to specialists in Honduras and to trainees in the country's only ear, nose, and throat residency program.

Christopher Halpin, Ph.D., wrote "Increasing hearing aid success: Insider tips for getting the best device for you," for the Harvard Health Letter, a newsletter for the lay public.

Paul Konowitz, M.D., John Lazor, M.D., and **David Kam, M.D., D.M.D.,** provided free oral, head and neck cancer screenings at Mass. Eye and Ear, Quincy on April 17th, 2013.

The **Department of Audiology** hosted their annual public forum on hearing loss, "Have You Heard?" on September 28th, 2013. For 13 consecutive years, this event has provided updates on clinical care and research related to hearing and balance.

(See spotlight story, "Office of Global Surgery and Health kicks off with program in Uganda," page 20.)

(Continued from page 17)

Photograph courtesy of Dr. Gregory Randolph

ENT Community Outreach

A number of Mass. Eye and Ear physicians attended the International Federation of Otolaryngology Societies (IFOS) meetings in Seoul, Korea in May 2013, including **Drs. Michael Rho, Eric Holbrook, Stacey Gray, Derrick Lin, James Rocco, Daniel Lee, Gregory Randolph, Nicolas Busaba, Phillip Song, Ramon Franco,** and Head and Neck Surgical Oncology fellow **Dr. Alice Lin.** The group presented multiple lectures, panels, and courses to an international audience of otolaryngologists, with more than 4,500 attendees. The group plans to create an MEEI program for the next IFOS meeting in Paris in 2017.

Stacey Gray, M.D., was involved in a number of conferences in her field this year, serving as invited speaker and panel moderator for many of these engagements. This year she contributed to the Harvard Macy Institute Program for Educators in the Health Professions, the Combined Otolaryngology Spring Meeting in Orlando, the American Rhinology Society Summer Symposium in Chicago, the International Federation of Oto-Rhino-Laryngological Societies World Congress in Seoul, and the American Academy of Otolaryngology–Head and Neck Surgery Annual Meeting.

Christopher Halpin, Ph.D., delivered the keynote address at the Spanish Congress of Audiology, Royal College of Physicians, Seville, titled "Clinical word recognition and audiologic disorders."

Dr. Halpin also spoke at the Sociedad Espanola de Otorhinolaryngology in Madrid, Spain in 2013.

Eric Holbrook, M.D., has been invited to speak and serve as a faculty member for the European Rhinology Society/ISIAN Congress in Amsterdam in 2014.

Richard Lewis, M.D., was an invited speaker on "Central vestibular processing investigated with electrical stimulation of canal ampullary nerves," at the Sensing Motion for Action Symposium in Montreal in July 2013. Dr. Lewis also spoke on "Investigating vestibular function with perceptual threshold testing," at Spaulding Hospital in Boston in April 2013.

Daniel Polley, Ph.D., lectured at the February 2013 meeting for the Association of Research in Otolaryngology on cortical modulation of sound representations in the auditory thalamus.

Gregory Randolph, M.D., served as panel moderator of "Avoidance of Complication in Thyroid/Parathyroid Surgery," and as panelist for "Papillary Carcinoma: prophylactic central neck dissection" at the American Cancer Society meetings.

Dr. Randolph also served on the steering committee for the 2nd World Congress on Thyroid Cancer, held in Toronto from July 10th–14th in 2013. The Congress is a global multidisciplinary meeting of all specialists involved in the treatment of thyroid nodule disease and thyroid cancer.

Konstantina Stankovic, M.D., Ph.D., presented at the February 2013 Association for Research in Otolaryngology (ARO) meeting on a selection of her unpublished work, including, "Loss of FGF23 signaling results in mixed hearing loss and middle ear malformation," "Molecular network analysis of hearing loss and hypogonadism," "Examining the role of Gtf2ird1 deletion in auditory physiology and behavior in a murine model of Williams-Beuren Syndrome," and "Finding characteristic DFNA9 cochlin-staining eosinophilic deposits in the middle ear."

Dr. Stankovic also presented at the American Otologic Society and American Neurotology Society meetings in April 2013 on the following topics, "Metabolomics analysis of pharmacotherapies for sensorineural hearing loss," "Aspirin intake correlates with halted growth of sporatic vestibular schwannoma in vivo," and "Molecular network analysis of sporadic vestibular schwannoma pathobiology highlights actin as a major modulator of tumor growth."

(See spotlight story, "Facial Nerve Center hosts 12th International Facial Nerve Symposium," page 19.)

Study follows Boston Marathon bombing victims with ear injuries

Drs. Alicia Quesnel and **Daniel Lee,** both physicians in the Otology and Neurotology division at Mass. Eye and Ear, and **Dr. Aaron Remenschneider,** a chief resident in otolaryngology, are leading a study that will seek to follow more than 130 patients suffering from ear injuries as a result of the Boston Marathon bombings.

In the wake of the bombings, a number of patients were seen at Mass. Eye and Ear and neighboring Boston hospitals with ear injuries, especially noise trauma and mechanical injuries, as a result of the blasts. While these conditions are common in otology clinics, this particular mode of injury is highly unusual.

"We realized in the course of taking care of these patients that there are some unanswered questions regarding how to best treat ear injuries related to a bombing," Dr. Quesnel said. "Some is known from the military literature, but it hasn't really been studied in this way previously."

Patients affected by noise trauma from the blasts experienced a range of injuries from temporary threshold shifts, to difficulty hearing in crowded environments, to permanent threshold shifts. Among other factors, the study will consider proximity to the bomb, as well as the direction the patient was facing, in relation to the severity of their symptoms.

The second set of problems commonly seen as a result of the bombing involves mechanical injuries, especially perforation of the eardrum. The study will investigate whether or not this condition heals at the same rate as other modes of injury, as well as any differences in how the perforation heals with this type of trauma. There is also some question as to how well these injuries heal after correction of the perforation through tympanoplasty.

Patients who participate in the prospective data collection are asked to fill out surveys that measure how severe their symptoms are. Many questions focus on common symptoms resulting from the blasts, such as hearing loss, tinnitus, and dizziness.

The multi-institutional effort is supported by involvement from Brigham and Women's Hospital, Beth Israel Deaconess Medical Center, Boston Children's Hospital, Boston Medical Center, Tufts Medical Center, and Harvard Vanguard Associates.

Facial Nerve Center hosts 12th International Facial Nerve Symposium

More than 300 clinicians and researchers representing 27 countries gathered at the historic Liberty Hotel for the 12th International Facial Nerve Symposium, hosted over the weekend of June 28th, 2013 by the Facial Nerve Center at Massachusetts Eye and Ear Infirmary.

Directed by **Drs. Tessa Hadlock, Mack Cheney,** and **Michael McKenna,** the Symposium brought together specialists from around the world and from a variety of specialties to share ideas and techniques relevant to the care of patients with facial nerve disorders.

The Sir Charles Bell Society, an organization dedicated to the exchange of ideas among facial nerve professionals, chose to host the symposium in Boston after Drs. Tessa Hadlock and Mack Cheney presented a compelling argument on behalf of the hospital at the end of the 2009 symposium in Rome.

Participants in the four-day, lecture-filled symposium were treated to daily keynote addresses on topics ranging from facial nerve reconstruction to social functioning with facial paralysis. Attendees also enjoyed live patient demonstrations on subjects such as physical therapy for facial movement disorders. The Facial Nerve Center at MEEI delivers a level of care that is very difficult for facial nerve patients to find outside of the Center, which focuses on conventional and innovative treatments, and surgery for disorders such as Bell's palsy.

Photograph by Laura Rykard

Office of Global Surgery and Health kicks off with program in Uganda

Photography from Uganda courtesy of Wendy Williams

Under the direction of **Dr. Mack Cheney,** the Kletjian Chair of Global Surgery and a physician in the Department of Otolaryngology at MEEI, the Office of Global Surgery and Health (OGSH) at the Massachusetts Eye and Ear Infirmary opened in 2013 to educate and improve local access to life-altering and life-saving ophthalmic and otolaryngologic care for those in need throughout the developing world. Its first initiative, a partnership with the Mbarara University of Science & Technology School of Medicine in Mbarara, Uganda, is underway.

Introducing a new model aimed at promoting longevity in global health programs, the Office of Global Surgery and Health will collaborate with existing medical schools to develop physician faculty through training. The overarching goal of the program is to develop an environment where the local medical community can advance independently.

"We're looking to create a critical mass of faculty, because that's what they really need to be self-sustaining," said Wendy Williams, Associate Director of the Office of Global Surgery and Health. "We need to nurture faculty and to develop an environment that supports local research and all these intangibles that help create opportunities for professional development."

The initiative in Mbarara, Uganda began with a site visit in February 2013, during which Williams and Dr. Cheney met with administrators and physicians from the Mbarara University of Science and Technology School of Medicine. Together, they developed a set of goals for the program.

For a period of three years, OGSH will integrate a rotation of faculty and fellows from the MEEI and HMS community into the local curriculum in Mbarara for onsite and remote subspecialty surgical instruction and lectures. At the end of those three years, they will have trained a generation of physicians in Uganda who are not only better prepared to address ophthalmic and otolaryngologic conditions in their local community, but also prepared to assume leadership as new residents matriculate into their program.

Dr. Mack Cheney was appointed the Kletjian Chair of Global Surgery thanks to the generosity of Carmella Kletjian.

Wendy Williams, Associate Director of the Office of Global Surgery and Health, joined by staff of the Mbarara Regional Referral Hospital.

Twelve percent of the population suffers from disabling hearing loss, and there are one million new cases of blindness and visual impairment in Uganda each year.

Beyond quality of life issues, otolaryngologic conditions are a leading cause of mortality in children under five years of age.

"Much like the goal of the Mass. Eye and Ear and Harvard communities, the goal is to create expertise in individuals in otolaryngology and ophthalmology," Dr. Cheney said. "Our proudest day would be in three years when there are graduates in Uganda in otolaryngology and ophthalmology."

A teaching hospital of the Mbarara University of Science & Technology School of Medicine, the Mbarara Regional Referral Hospital is intended to be the 2nd national referral hospital in Uganda after completing its rehabilitation. It is home to one of two otolaryngology residency programs in Uganda.

Otolaryngologic and ophthalmic issues and the lack of expertise in Uganda are a growing concern for the local community. Twelve percent of the population suffers from disabling hearing loss, and there are one million new cases of blindness and visual impairment in Uganda each year. Beyond quality of life issues, otolaryngologic conditions are a leading cause of mortality in children under five years of age.

"Many of the causes for that mortality rate are things like choking hazards that we take for granted, but if you're in an area where doctors

(Continued on page 22)

Office of Global Surgery and Health kicks off with program in Uganda

(continued from page 21)

Dr. Cheney and Wendy Williams with Dr. Shapiro and faculty of the Mbarara University of Science and Technology.

aren't trained to care for these problems, it leads to completely unnecessary disability and mortality," Williams said. "There aren't even enough doctors prepared to address foreign body removal."

Raising cultural awareness by connecting with local clinics is another way that OGSH plans to address otolaryngologic and ophthalmic problems in Uganda. Many of the diseases and conditions more commonly associated with this region, such as HIV/AIDS, malaria, and other communicable diseases, have otolaryngologic and ophthalmic manifestations that many physicians in Uganda lack the expertise needed to identify and treat those problems.

"A lot of what we're doing is growing the program and working with community outreach to build awareness. We want them to be on the lookout for otolaryngologic and ophthalmic manifestations, which are very frequently linked to people living with HIV," Williams said.

In addition to advancing the clinical skill sets of trainees in Mbarara, the program will also work towards creating an environment that allows for clinical research to flourish—through instruction on writing papers, applying for grants, and other practices in professional development.

"These are skills that people can develop, and it's one of the reasons why having a longer term presence is valuable. Learning how to research and how to write papers and apply for grants—these are not skills you can offer quick tips on and then leave. They are ongoing processes in department building," Williams said.

At the end of three years, when residents in Uganda have completed their training in otolaryngology and ophthalmology, OGSH will shift its focus to another site. However, the mentorship in Uganda will be ongoing, aided by the wonders of technology.

"What you can do with supporting remotely is remarkable. There's video conferencing and remote consultation. You can maintain the collegial relationship," Williams said.

"This program is going to have enough arms that almost anyone could do something, even if you don't want to travel to Uganda for two weeks."

—Dr. Cheney

Dr. Cheney at the Mbarara Regional Referral Hospital.

Through initiatives like the partnership with Mbarara University of Science & Technology School of Medicine, OGSH hopes to offer the benefits of a structured, long-term approach to global health programs, while also making the most of the time spent by physicians taking part in the program.

"We know that their time is precious. We're designing a program where we will only take a week or two of their time a year and optimize that time spent by integrating into the local curriculum—making it a part of a grander whole," Williams said.

Otolaryngologists and ophthalmologists within the Mass. Eye and Ear and Harvard communities who are interested in becoming involved with the OGSH program in Uganda can help in a variety of ways, from curriculum development and telemedicine programs conducted from Boston to onsite lectures and instruction in Mbarara.

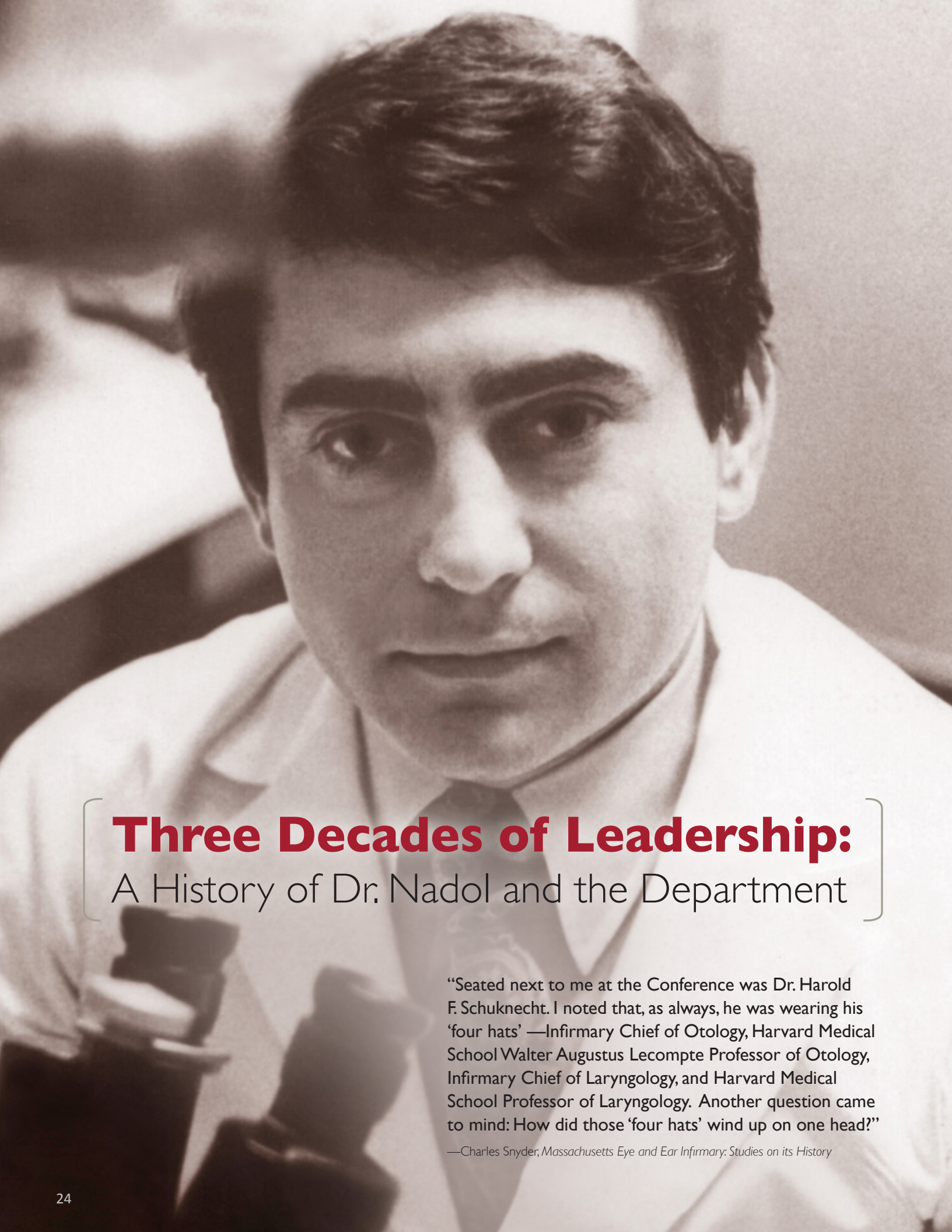
"This program is going to have enough arms that almost anyone could do something, even if you don't want to travel to Uganda for two weeks," Dr. Cheney said.

For more information about the Office of Global Surgery and Health and its partnership with the Mbarara University of Science & Technology School of Medicine, please contact Wendy Williams at ***wendy_williams@meei.harvard.edu.***

1 http://www.ncbi.nlm.nih.gov/pubmed/19128699

2 Uganda Ministry of Health Annual Health Sector Performance Report 2011/2012

3 http://www.monitor.co.ug/News/National/Shortage-of-ENT-centres-hampers-fast-treatment/-/688334/1706802/-/c9tgym/-/index.html



Three Decades of Leadership:
A History of Dr. Nadol and the Department

"Seated next to me at the Conference was Dr. Harold F. Schuknecht. I noted that, as always, he was wearing his 'four hats' —Infirmary Chief of Otology, Harvard Medical School Walter Augustus Lecompte Professor of Otology, Infirmary Chief of Laryngology, and Harvard Medical School Professor of Laryngology. Another question came to mind: How did those 'four hats' wind up on one head?"

—Charles Snyder, *Massachusetts Eye and Ear Infirmary: Studies on its History*

Friends and colleagues from all over the world gathered over the week of June 11th to honor Joseph B. Nadol, Jr., M.D., and to commemorate his 28 years of service in the role of Chairman of the Department of Otology and Laryngology at Harvard Medical School and Chief of Otolaryngology at Massachusetts Eye and Ear Infirmary.

As part of a traditional "Festschrift" celebration, activities included a cocktail reception, a scientific session, and a black tie dinner held at the historic Liberty Hotel. The events prompted numerous stories and reflection on Dr. Nadol's long tenure as chief and chairman.

Like his predecessor Dr. Schuknecht, Dr. Joseph B. Nadol, Jr. has worn a number of hats since he was appointed Chief of the Department of Otolaryngology at Massachusetts Eye and Ear Infirmary and Chairman of the Department of Otology and Laryngology at Harvard Medical School.

Dr. Nadol stepped into the role as Chief and Chairman in 1985 and was appointed Walter Augustus Lecompte Professor and Chairman in 1987. At just 41 years of age and only ten years after completing his residency training, he was a very young replacement for Dr. Schuknecht. His quick rise is a testament to his strong intellect, intuitive leadership skills, and tireless work ethic, but the extraordinary accomplishments that followed exceeded any and all expectations.

Early Influences

Prior to coming to the Infirmary to complete his residency training in otolaryngology, Dr. Nadol completed his medical degree at Johns Hopkins School of Medicine. However, his interest in the field of otolaryngology began while he was an undergraduate at Harvard College and spent his summers at a research laboratory in Woods Hole, Mass. One of the studies that interested him was in the area of signal transduction, which led to an interest in neuroscience, and ultimately an interest in otolaryngology.

In addition to his summers in the laboratory at Woods Hole, Dr. Nadol was heavily influenced by a number of close mentors. During his internship in General Surgery at Beth Israel, Dr. Nadol worked with Dr. William Silen,

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Chairman of General Surgery. Dr. Silen had an early impact on Dr. Nadol's training and career.

Clinically, he has been described as a chip off the block of Hal Schuknecht, his predecessor in the role of Chief and Chairman. Colleagues have described him as a critical thinker who would never do or recommend things to patients that are not of sound scientific substantiate. Dr. Schuknecht was a big proponent of making sure that there is a science behind what physicians do for their patients, and Dr. Nadol has taken the same approach in his practice.

Contributions to MEEI

Dr. Nadol was appointed the fifth Chief of Otolaryngology at Massachusetts Eye and Ear Infirmary on June 5, 1985. Drs. Harris P. Mosher, LeRoy A. Schall, Philip E. Meltzer, and Harold F. Schuknecht had fulfilled the role previously (and in that order). At the time of his promotion, Dr. Nadol was 41 years old.

Taking on this vital leadership role at such a young age and so early in his career, Dr. Nadol worked tirelessly toward not only developing himself as a distinguished academic otolaryngologist, but also dedicating himself to the success of the department and his mentees. He quickly acquired a reputation for his exceptionally strong work ethic and his intuitive ability to lead by example. Over the years, he has empowered other faculty members to do the same.

Among his many contributions, Dr. Nadol expanded the department vastly over many years, recruiting a multitude of intelligent minds from various backgrounds within the field of otolaryngology, thus inspiring the "subspecialty" approach that sets our institution apart. He has built the department into one of the largest and preeminent otolaryngology departments in the world.

"In the future, ENT will see increased subspecialization. The horizons of otolaryngology are expanding with the use of technology and increasing sophistication of surgical procedures."

—Dr. Nadol, Massachusetts Eye and Ear Infirmary Annual Report, 1982

To best understand the remarkable growth the department has seen under Dr. Nadol's leadership, one must appreciate the difference between the size and makeup of the department at the time of his appointment in 1985 and what it looks like today in 2013. In 1985, there were five full-time physicians including Dr. Nadol himself. Each physician had his own set of clinical and research interests, but on the whole, they all practiced general otolaryngology with subspecialty interests.

Gradually, and over the course of three decades, the department grew exponentially to 49 full-time faculty members at the Boston campus. Dr. Nadol recruited renowned physicians with expertise in the areas of otology, head and

Members of the press surround Dr. Joseph Nadol during a press conference.

Clinical Contributions

Dr. Nadol performed the first cochlear implant procedure in New England at the Infirmary on December 18th, 1984.

neck surgery, facial plastic and reconstructive surgery, pediatric otolaryngology, and eventually laryngology, thyroid and parathyroid surgery, and dermatology.

He also played a significant role in developing the suburban centers of the Department, recruiting 21 physicians for MEEI locations in Braintree, Concord, Duxbury, East Bridgewater, Milton, Newton, Quincy, Stoneham, and Weymouth.

As both Chairman of the Department of Otology and Laryngology at Harvard Medical School and Chief of the Department of Otolaryngology at Massachusetts Eye and Ear Infirmary, he has balanced the interests of both institutions incredibly well.

Research Contributions

One of Dr. Nadol's greatest contributions to the field of otology stemmed from his research in microscopy techniques. In the early 1980s, the Infirmary was considered a leader in microscopy research. Dr. Schuknecht had made significant contributions in the area of light microscopy, while Dr. Nadol, along with prolific scientist Dr. Robert S. Kimura, worked on an evolving technique—electron microscopy.

At the time, light microscopy was used to magnify slides to a certain degree, but the emerging electron microscopy technique allowed for magnification well beyond the reach of light microscopy. It allowed the scientist to see things in much greater detail—inside of cells; whereas with light microscopy, it's only possible to see the cells themselves.

However, electron microscopy does have one important limitation that Dr. Nadol was determined to overcome. In order for electron microscopy to be successful, the temporal bone must be removed from the living organism and immediately placed into fixation solution to preserve the tissue. Otherwise, the tissue can deteriorate rapidly, and while you can't see those changes very easily by light microscopy, they are very apparent by electron microscopy because of the degree of magnification.

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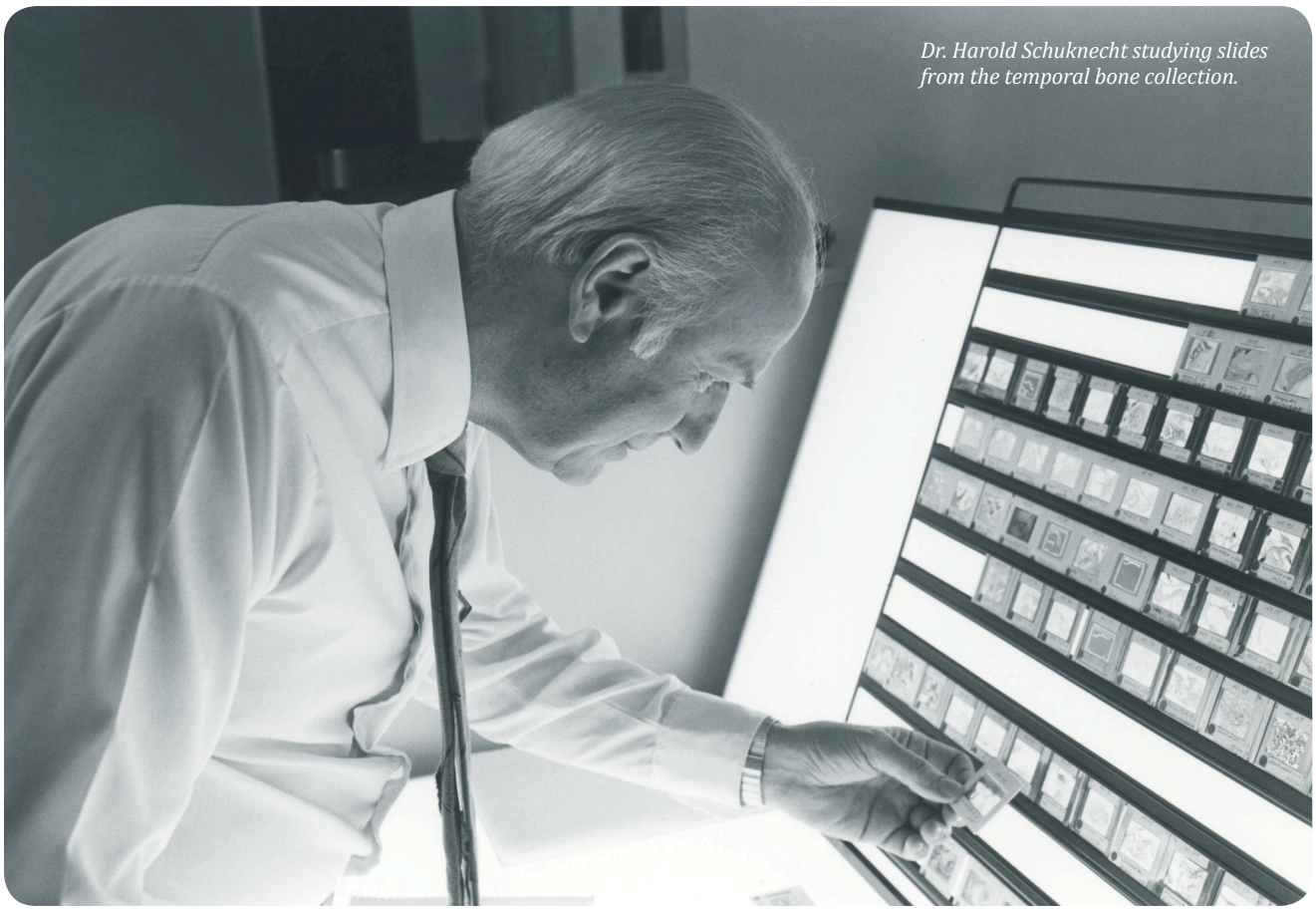

Dr. Harold Schuknecht studying slides from the temporal bone collection.

When Dr. Nadol joined the Department under Dr. Schuknecht's leadership, he quickly decided that he wanted to find a way to study human ears with the electron microscopy technique. He went on to develop this area of expertise, and he eventually showed that he could obtain well-preserved specimens and could study them successfully using the electron microscopy technique. The National Institutes of Health supported his use of this technique through generous grant funding.

Following the success of his use of the electron microscopy technique, Dr. Nadol has made important discoveries in human ear pathology. In the early 1980s, he discovered a synapse in humans on the outer hair cells that had never been reported before in animals. The significance is not fully appreciated at this time, but they are believed to play some role in the processing of auditory information.

Dr. Nadol also applied the electron microscopy technique to the human ear with Ménière's disease. In the later 1980s, he discovered that there was some evidence of dendritic neural pathology that could not be seen by light microscopy. Because Ménière's disease typically occurs on one side, he was able to use the other ear as a control to compare to the diseased ear. This discovery significantly contributed to the current understanding of Ménière's disease.

Along the way, Dr. Nadol engaged in other otologic research that made a significant impact in a few ways. He published a paper in 1975 on the otologic manifestations of syphilis and found that syphilis can be seen on a consistent basis within the ossicles, particularly in the incus bone, and even talked about removing the incus bone to make a diagnosis for syphilis. From this, according to colleagues, Dr. Nadol learned to "never write about something that you don't want to be seeing in the office." To this day, he tells the story of when his waiting room turned into a "combat zone."

Perhaps his most significant research contributions were made in his later studies on the histopathology of patients who have undergone cochlear implantation. His work in this area has led to a significant improvement in our understanding of what sensory elements are present in the ear for patients who undergo implantation, as well as an understanding of the actual effects of the implantation on the ear itself. Throughout the years, he has shared much of this research with research fellows from around the world.

Legacy/Future Plans

After nearly three decades of unwavering dedication as Chief of the Department of Otolaryngology at Massachusetts Eye and Ear Infirmary and Chairman of the Department of Otology and Laryngology at Harvard Medical School, Dr. Nadol has decided to step down from this role. He plans to continue his clinical practice in otology and focus more intently on his research, particularly that of the histopathology of the ear.

A visionary with incredible intellect and ambition, Dr. Nadol has made enormous contributions to the department and to the field of otology. But above all, he is someone who cares deeply for other people and for this institution. His passion for his colleagues, his trainees, and this institution is unrivaled. The department and his colleagues are indebted to him and in awe of his extraordinary accomplishments.

The Joseph B. Nadol, Jr., M.D., Chair in Otolaryngology

In honor of Dr. Nadol's esteemed career as a talented leader, gifted researcher, exceptional mentor, and dedicated physician, Mass. Eye and Ear is establishing the Joseph B. Nadol, Jr., MD, Chair in Otolaryngology. This endowed fund will support the academic activities of a senior physician or scientist, providing a vehicle for others to follow the unparalleled example that Dr. Nadol has set and preserving his legacy for generations to come. ●

To contribute to this endeavor, please contact:

Robin Popp
Senior Director of Development
Major Gifts–Otolaryngology
Massachusetts Eye and Ear
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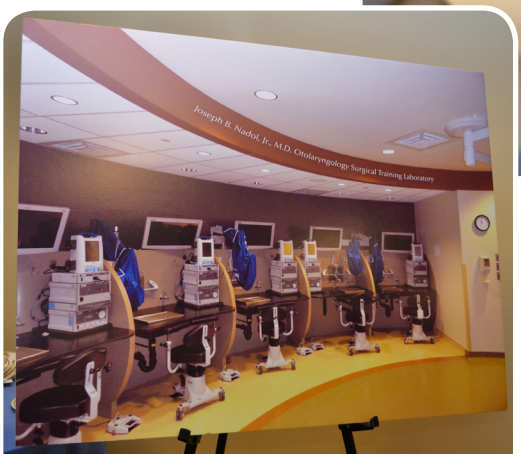

Faculty Promotions

The Department congratulates Christopher A. Shera, Ph.D., on his promotion to Professor of Otology and Laryngology at Harvard Medical School this year.

Dr. Shera first joined the department working in the Eaton-Peabody Laboratories (EPL) in 1997 as an Instructor of Otology and Laryngology at Harvard Medical School. He previously completed his undergraduate training in physics at Haverford College and earned his Ph.D. in physics and neurobiology at the California Institute of Technology.

In 1994 Dr. Shera moved to Boston to begin a postdoctoral fellowship in neurophysiology at the Massachusetts Eye and Ear Infirmary and the Research Laboratory of Electronics at MIT, under the direction of Dr. John Guinan.

Dr. Shera at the celebration for his promotion to Professor.

Dr. Shera studies how the ear amplifies, analyzes, and creates sound. His laboratory, the EPL Auditory Physics Group, has made a number of major contributions to the current understanding of cochlear mechanics and otoacoustic emissions, including developing the theory of "coherent reflection"; demonstrating that otoacoustic emissions arise by two fundamentally different mechanisms; showing that the cochlear amplifier works by modifying the damping rather than the stiffness of the partition; establishing that spontaneous otoacoustic emissions arise by multiple internal reflection within the cochlea; showing that the mammalian cochlea acts as a biological, hydromechanical analogue of a laser amplifier; and developing a noninvasive, otoacoustic method for estimating the sharpness of cochlear tuning. For his contributions to the understanding of otocoustic emissions, he was named a Fellow of the Acoustical Society of America in 2001.

2013 Promotions

Professor
Christopher Shera, Ph.D.

Associate Professor
Daniel Lee, M.D.

Assistant Professor
Benjamin Bleier, M.D.
Brian Fligor, M.S., Sc.D.
Robin Lindsay, M.D.
Stephane Maison, Ph.D.
Jennifer Shin, M.D.
Kenneth Whittemore, Jr., M.D., M.S.

Instructor
(promoted from training status)
Eelam Adil, M.D., M.B.A.
Mitchell Day, Ph.D.
Mingqian Huang, Ph.D.
Albena Kantardzhieva, Ph.D.

An active participant in the research community, Dr. Shera has organized numerous symposia and conferences, including the 11th International Mechanics of Hearing Workshop. He also contributes reviews, book chapters, and invited presentations for audiologists and clinicians, including presentations at the meetings of the American Academy of Audiology, the American Speech-Language Hearing Association, and the American Auditory Society. He now serves as Associate Editor of the Journal of the Acoustical Society of America.

A dedicated teacher and mentor, Dr. Shera teaches several core and elective courses in the Harvard-MIT Program in Speech and Hearing Bioscience and Technology (SHBT). He directs the course "Modeling Issues in Speech and Hearing," which explores the theory and practice of scientific modeling using current and historical case studies. He also serves as chair of the SHBT Admissions Committee. In addition, he has given invited public presentations on sound and hearing at the prestigious World Science Festival, the White Light Festival at Lincoln Center for the Performing Arts, the Coolidge Corner Theatre's Science on Screen series, and on National Public Radio. Dr. Shera's commitment to education is perhaps best demonstrated by the Irving M. London Teaching Award, an honor he received in 2007. ●

News from the **Harvard Otolaryngology Residency Program**

by Stacey Tutt Gray, M.D., Residency Director

Dr. Stacey Tutt Gray, Residency Director.

On behalf of faculty and staff of the Harvard Otolaryngology Residency Program, I'd like to acknowledge the remarkable accomplishments of the program this year. This year we celebrated the commencement of the class of 2013, as well as the arrival of a bright new class of residents and interns. As part of the graduation ceremonies, faculty, staff, and trainees gathered together for the 1st Annual Department Meeting, bringing us closer in our collaborative efforts in training future leaders in the field of otolaryngology.

Resident and Fellow Graduation Ceremonies

This year we celebrated the class of 2013 at a June 21st ceremony held in the Meltzer auditorium at Mass. Eye and Ear. Our outstanding graduates included **Drs. Sang Kim, Josh Meier, Daniel Roberts, and Josef Shargorodsky. Roland D. Eavey, M.D., S.M.,** Chairman of the Department of Otolaryngology at Vanderbilt University, delivered the graduation address. A 1981 graduate of the residency program and former Director of Pediatric Otolaryngology at Mass. Eye and Ear, Dr. Eavey challenged graduates to think about the various ways they could make an impact on the medical community in his address, "Transforming Lives."

As part of the ceremony, a handful of trainees and faculty were awarded for their work in the program:

- **Dr. Daniel Roberts** was awarded the **Chief Resident Teaching Award** by collective vote of the junior residents.

- **Dr. Josef Shargorodsky** received the **Jeffrey P. Harris Research Award** for his FOCUS project entitled, "Assessment of Objective and Subjective Hearing in the US population," a project that resulted in a first author publication in *JAMA*. His research mentors for this project included Dr. Roland Eavey and Dr. Gary Curhan of the Channing Laboratory.
- **Dr. Dunia Abdul-Aziz** was announced as **first place winner** of the annual **Harvard Otolaryngology Research Poster Session** for her work with Dr. Albert Edge entitled "Epigenetic Changes in Cochlear Progenitor Cell Differentiation to Hair Cells" that was presented at the 2013 International Society for Stem Cell Research. **Dr. Sunshine Dwojak** was announced as the **second place winner** for her poster entitled "Disparities in Survival for American Indians with Head and Neck Squamous Cell Carcinoma" that was presented at the Head and Neck society meeting at COSM 2013. This work was performed with Drs. Kevin Emerick and Daniel Deschler. Both Drs. Abdul-Aziz and Dwojak are products of the Harvard Otolaryngology seven-year research training track.
- The graduating chiefs awarded the **William Montgomery Award for Excellence in Teaching** to **Dr. Daniel Lee.**
- A newly instituted **teaching award for clinical fellows** was introduced by the chief residents and was awarded to **Dr. Marc Herr,** who just completed his second year of fellowship in head and neck oncologic and microvascular surgery.

Above: Drs. Roland Eavey and Joseph B. Nadol, Jr., at the Resident and Fellow Graduation ceremonies.

Inset: Drs. Michael Cunningham and Roland Eavey.

All four graduates contributed significantly throughout residency, publishing multiple manuscripts and presenting at prestigious national meetings. Dr. Meier has started fellowship training in rhinology and endoscopic skull base surgery here at Mass. Eye and Ear. Dr. Sang Kim will be completing a fellowship in facial plastic surgery in Birmingham, Alabama with Dr. Daniel Rousso. Dr. Josef Shargorodsky will be completing fellowship training in rhinology at Johns Hopkins University. Dr. Daniel Roberts has joined a general otolaryngology practice in Wisconsin while his wife completes a urology fellowship this year. He plans to pursue fellowship training in neurotology in 2014. We eagerly anticipate the continued professional growth and development of the class of 2013.

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(continued from page 33)

Class of 2013

From left to right: Drs. Sang Kim, Daniel Roberts, Joshua Meier, and Josef Shargorodsky.

Sang Kim, M.D.
Medical School: Harvard Medical School
Internship in General Surgery: Brigham and Women's Hospital
Future plans: Facial Plastic and Reconstructive Surgery Fellowship, Dr. Daniel Rousso, Birmingham, AL

Joshua Meier, M.D.
Medical School: Keck School of Medicine at the University of Southern California
Internship in General Surgery: Brigham and Women's Hospital
Future plans: Rhinology Fellowship, Drs. Metson, Gray, and Holbrook, Massachusetts Eye and Ear Infirmary

Daniel Roberts, M.D., Ph.D.
Medical School: Boston University School of Medicine
Internship in General Surgery: Beth Israel Deaconess Medical Center
Future plans: Private Practice, Alliance ENT, Milwaukee, WI; Applying for Neurotology Fellowship to begin in 2014

Josef Shargorodsky, M.D., M.P.H.
Medical School: University of Michigan School of Medicine
Internship in General Surgery: Beth Israel Deaconess Medical Center
Future plans: Rhinology Fellowship with Dr. Andrew Lane, Johns Hopkins, Baltimore, MD

Clinical Fellows, Massachusetts Eye and Ear Infirmary

Nipun Chhabra, M.D., Rhinology
Medical School: George Washington University School of Medicine
Residency in Otolaryngology: University Hospitals Case Western Medical Center
Future plans: Attending staff, OSF Medical Center, Rockford, IL

E. Ashlie Darr, M.D., Thyroid and Parathyroid Surgery
Medical School: New York Medical College
Residency in Otolaryngology: New York Eye and Ear Infirmary
Future plans: Joining the practice of Drs. Vernick and Gopal, Chestnut Hill, MA

David Healy, M.D., Rhinology
Medical School: Uniformed Services University
Residency in Otolaryngology: Naval Medical Center, San Diego
Future plans: Chief of Rhinology and Allergy Service at Portsmouth Naval Medical Center, Portsmouth, VA

Alice Lin, M.D., Head and Neck Surgical Oncology/Microvascular
Medical School: Northwestern Feinberg School of Medicine
Residency in Otolaryngology: Northwestern University
Future plans: Assistant Professor and Chief of Microvascular Reconstruction and Robotic Surgery, SUNY Downstate Medical Center, Brooklyn, NY

Marc Hohman, M.D., Facial Plastic and Reconstructive Surgery
Medical School: Dartmouth Medical School
Residency in Otolaryngology: Madigan Army Medical Center, Tacoma, WA

From left to right: Drs. Ryan Murray, Jonathan Sherman, Eelam Adil, Stephen Newton.

Future plans: Major, Medical Corps, US Army, and Staff Otolaryngologist/Facial Plastic Surgeon, Madigan Army Medical Center, Tacoma, WA

Lindsay Reder, M.D., Laryngology
Medical School: University of Chicago Medical School
Residency in Otolaryngology: University of Southern California, Los Angeles
Future plans: Assistant Professor, Department of Otolaryngology, University of Southern California

Clinical Fellows, Pediatric Otolaryngology, Boston Children's Hospital

Eelam Adil, M.D., M.B.A.
Medical School: University of Miami Miller School of Medicine
Residency in Otolaryngology: Pennsylvania State University
Future plans: Joining the full-time Pediatric Otolaryngology faculty at Boston Children's Hospital

Ryan Murray, M.D.
Medical School: University of Iowa, Carver College of Medicine
Residency in Otolaryngology: Thomas Jefferson University Hospital
Future plans: Inova Health Systems, Fairfax, VA

Stephen Newton, M.D.
Medical School: Howard University College of Medicine
Residency in Otolaryngology: University of Iowa
Future plans: Children's Hospital of Colorado at Colorado Springs

From left to right: Drs. Marc Hohman, Alice Lin, David Healy, Lindsay Reder, Nipun Chhabra, Ashlie Darr.

Jonathan Sherman, M.D.
Medical School: Mayo Medical School
Residency in Otolaryngology: University of Chicago Medical Center
Future plans: Department of Otolaryngology, University of Chicago Medical Center

1st Annual Meeting of the HMS Department of Otology and Laryngology

This year we took a step forward by connecting faculty and trainees from all four of our clinical sites at the 1st Annual Meeting of the Harvard Medical School Department of Otology and Laryngology. With so few occasions throughout the year to gather all members of the department together, the annual meeting offered the benefit of having everyone in the same room and the opportunity to share updates on current initiatives.

The formal agenda included speakers from every division in otolaryngology, including: **Dr. Deschler** from Head and Neck Surgical Oncology, **Dr. Stankovic** from the Eaton-Peabody Laboratories, **Dr. Annino** from Brigham and Women's Hospital, **Dr. Hadlock** from Facial Plastic and Reconstructive Surgery, **Dr. Randolph** from General Otolaryngology and Thyroid and Parathyroid Surgery, **Dr. Franco** from Laryngology, **Drs. Cunningham** and **Volk** from Boston Children's Hospital, **Dr. McKenna** from Otology, **Dr. Caradonna** from Beth Israel Deaconess Medical Center, and **Dr. Hartnick** from Pediatric Otolaryngology.

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I'd like to thank each of our speakers this year for their thoughtful updates on activities within the department. The content of each presentation focused on scientific and research developments, clinical innovations, and educational initiatives. But perhaps more importantly, each speaker provided a brief update on the individual activities of all faculty members within their division. This new opportunity to hear about the work of so many physicians and scientists working for the collective department proved to be incredibly valuable.

I greatly look forward to continuing this program at our next annual meeting in conjunction with our resident and fellow graduation in June 2014. Each year, we will offer informative presentations from various members of the department, highlighting clinical, research, and educational initiatives from every corner. Hopefully this will help to increase collaboration across divisions and keep all of us connected.

Welcoming New Residents

It is a great pleasure to welcome five new residents to Mass. Eye and Ear this year, Drs. Francis Creighton, Taha Jan, Brian Lin, Matthew Naunheim, and George Scangas. We also welcome four new interns, Dr. Jennifer Fuller to Beth Israel Deaconess Medical Center, Drs. Deepa Galaiya and Anuraag Parikh to Brigham and Women's Hospital, and Dr. Sid Puram to Massachusetts General Hospital.

Dr. Francis Creighton received his undergraduate degree in biomedical engineering from the Georgia Institute of Technology and his medical degree from Emory University School of Medicine. He received the William V. Muse Tau Kappa Epsilon Educational Foundation Scholarship in 2007 and the President's Undergraduate Research Award in 2005. Dr. Creighton completed his Internship in General Surgery at Massachusetts General Hospital.

Dr. Taha Jan received his undergraduate degree in molecular and cellular biology from Vanderbilt University and his medical degree from Stanford University. He received a 2011 Travel Award from the Association for Research in Otolaryngology (ARO), in addition to serving as podium presenter at the organization's annual meeting. Dr. Jan completed his Internship in General Surgery at Massachusetts General Hospital.

Dr. Brian Lin received his undergraduate degree in neuroscience from Johns Hopkins University and his medical degree from Johns Hopkins University School of Medicine. He received the Johns Hopkins University School of Medicine Dean's Scholarship in 2010 and 2011, as well as the Hubbard Scholarship in 2009, 2010, and 2011. Dr. Lin completed his Internship in General Surgery at Beth Israel Deaconess Medical Center.

Dr. Matthew Naunheim received his undergraduate degree in history and science from Harvard College before completing an MD/MBA joint degree from Harvard Business School and Harvard Medical School. He is the 2011 recipient of the Student Research Award from the Association of Academic Surgeons, the 2010 recipient of an award for "Best Student Presentation" at the Society for General Internal Medicine (SGIM) regional meeting, and the 2010 recipient of the Norfolk District Medical Society scholarship grant. Dr. Naunheim completed his Internship in General Surgery at Brigham and Women's Hospital.

Dr. George Scangas received his undergraduate degree in biomedical engineering from the University of Pennsylvania and his medical degree from the University of Pennsylvania School of Medicine. In 2009, Dr. Scangas received the University of Pennsylvania Clinical Neurosciences Tract research grant and the Dr. Nicholas Padis Memorial graduate scholarship. He is also the recipient of the 2010 and 2011 Dr. Peter A. Theodos Memorial graduate scholarship. Dr. Scangas completed his Internship in General Surgery at Brigham and Women's Hospital.

Acknowledgments

I'd like to take this opportunity to thank the dedicated staff of the Harvard Otolaryngology Residency Program for all of the hours spent teaching in the clinic and the operating room, directing conferences, delivering lectures, mentoring research projects, and for their countless other contributions to the program.

Associate Program Director
Kevin Emerick, M.D.

Program Site Director (BIDMC)
David Caradonna, M.D.

Program Site Director (BWH)
Jayme Dowdall, M.D.

Program Site Director (BCH)
Mark Volk, M.D., D.M.D.

ENT Education Committee
David Caradonna, M.D.
Daniel Deschler, M.D.
Jayme Dowdall, M.D.
Kevin Emerick, M.D.
Ramon Franco, Jr., M.D.
Stacey Gray, M.D.
Tessa Hadlock, M.D.
Christopher Hartnick, M.D., M.S.
Eric Holbrook, M.D.
Joseph Nadol, Jr., M.D.
H. Gregory Ota, M.D.
Gregory Randolph, M.D.
Steven Rauch, M.D.
William Sewell, Ph.D.
Phillip Song, M.D.
Mark Volk, M.D., D.M.D.

Resident Members
Gillian Diercks, M.D.
Sunshine Dwojak, M.D.
Mathew Mori, M.D.
Ahmad Sedaghat, M.D., Ph.D.

Resident Advisors
David Caradonna, M.D.
Michael Cunningham, M.D.
Daniel Deschler, M.D.
Jayme Dowdall, M.D.
Kevin Emerick, M.D.
Stacey Gray, M.D.
Eric Holbrook, M.D.
Steven Rauch, M.D.
Mark Volk, M.D., D.M.D.

Dr. Gray with Associate Program Director Dr. Kevin Emerick

Focus Project Mentors
Benjamin Bleier, M.D.
Mack Cheney, M.D.
Daniel Deschler, M.D.
Albert Edge, Ph.D.
Christopher Hartnick, M.D., M.S.
Daniel Lee, M.D.
John Meara, M.D.
Ralph Metson, M.D.
Michael McKenna, M.D.
James Rocco, M.D., Ph.D.
Phillip Song, M.D.
Claus Wilke, Ph.D.

Mock Oral Boards Examiners
Benjamin Bleier, M.D.
Jacob Brodsky, M.D.
Kevin Emerick, M.D.
Stacey Gray, M.D.
Tessa Hadlock, M.D.
Donald Keamy, Jr, M.D., M.P.H.
Daniel Lee, M.D.
Derrick Lin, M.D.
Robin Lindsay, M.D.
Steven Rauch, M.D.

Temporal Bone Dissection Course Faculty
Ronald de Venecia, M.D., Ph.D. (Director)
Daniel Lee, M.D.
Joseph Nadol, Jr., M.D.
Michael McKenna, M.D.
Steven Rauch, M.D.
Felipe Santos, M.D.

Endoscopic Sinus Course Faculty
Benjamin Bleier, M.D. (Director)
Nicolas Busaba, M.D.
Stacey Gray, M.D.
Eric Holbrook, M.D.
Michael Platt, M.D.
Elie Rebeiz, M.D.

PGY2 Anatomy Course Faculty
Barbara Fullerton, Ph.D. (Director)

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Department of Otology and Laryngology
Harvard Medical School
Annual Meeting, June 21, 2013

Alumni News

Please keep us apprised of your latest accomplishments by submitting news to *suzanne_day@meei.harvard.edu*.

Completed the Harvard Otolaryngology Residency Program in 2008 and a fellowship in Head and Neck Surgical Oncology/Microvascular at MEEI in 2009

2009

Anthony Nichols, M.D., is conducting a 3-year clinical trial for patients with early stage cancer of the oropharynx that directly compares the quality of life outcomes of the current standard treatment (radiation, plus or minus chemotherapy) with transoral robotic surgery. In collaboration with radiation oncologist Dr. David Palma, Dr. Nichols received a grant from the Canadian Cancer Society to conduct the study. Dr. Nichols is currently an Assistant Professor in the Head and Neck Division at the University of Western Ontario.

Completed the Harvard Otolaryngology Residency Program in 2008

2008

W. Matthew White, M.D., was promoted to Director of the Division of Facial Plastic and Reconstructive Surgery at NYU Langone Medical Center.

Completed the Harvard Otolaryngology Residency Program in 2005

2005

Adele Evans, M.D., has been promoted to Associate Professor of Otolaryngology at Wake Forest School of Medicine. She recently received a grant from the North Carolina Emergency Medicine Services to develop a tracheotomy education program that will include hands-on training with simulators for EMTs and paramedics in North Carolina, as well as nurses, respiratory therapists and family members at Wake Forest. She will also co-chair the North Carolina Walk4Hearing in October 2013.

Completed the Harvard Otolaryngology Residency Program in 2004

2004

Carlos Ayala, M.D., was honored with a retirement ceremony on May 31, 2013 to celebrate his 25 years of service to the United States Air Force. Dr. Ayala served as Chief of Otolaryngology and Deputy Chief of Medical Staff at MacDill Air Force Base in Tampa, Fla., as well as Chief of Facial Plastic Surgery and Flight Commander of Surgical Services at Landstuhl

Regional Medical Center in Landstuhl, Germany. He will join a private practice in Texas.

Completed a fellowship in Laryngology at MEEI in 2002

2002

Seth Dailey, M.D., published his first book, *Laryngeal Dissection and Surgery Guide,* with Thieme Medical Publishers, Inc., in 2013. He was inspired to write the book when he was a laryngology fellow at MEEI with Dr. Zeitels. He also worked with Dr. James Kobler and Dr. James Heaton at that time. Dr. Dailey currently serves as Chief of Laryngology and an Associate Professor of Otolaryngology at the University of Wisconsin.

Completed the Harvard Otolaryngology Residency Program in 1994

1994

Jay T. Rubinstein, M.D., Ph.D., is conducting the first "in-human" study that tests a vestibular prosthesis to help restore balance for patients with Meniere's disease. Dr. Steven Rauch from Massachusetts Eye and Ear Infirmary serves on the data safety and monitoring board for the study. Dr. Rubinstein is currently Professor of Otolaryngology–Head and Neck Surgery and Professor of Bioengineering at the University of Washington in Seattle.

Completed the Harvard Otolaryngology Residency Program in 1984

1984

Robert Wang, M.D., currently serves as Chair of the Division of Otolaryngology–Head and Neck Surgery at the University of Nevada School of Medicine in Las Vegas, NV, where he oversees a head and neck surgeon, neurotologist, pediatric otolaryngologists, skull base/reconstructive surgeon, and a general otolaryngologist/sinus surgeon. He also directs the division's residency program, which is in its second year.

Completed the Harvard Otolaryngology Residency Program in 1983

1983

Alfonso Barrera, M.D., practices in Houston, Texas, where he is currently writing a 2nd edition of his textbook, *Follicular Unit Micrografting and Minigrafting: the Art of Hair Transplantation,* to be published by Quality Medical Publishing in 2013. He also served as invited faculty for a number of scientific meetings this year, including the ASAPS annual meeting in New York City, the 43rd Finnish Aesthetic Teaching Symposium in Finland, and the Texas Society of Plastic Surgeons annual meeting. He has also been invited as Professor and Co-Chairman to the 3rd International Hair Surgery Master Course Congress at the European Masters in Aesthetic and Anti-Aging Medicine in Paris, to the International Society for Hair Restoration Surgery annual meeting, and to the Corrective Surgery and Strategies Workshop in San Francisco in October 2013.

Completed a research fellowship at MEEI in 1980

1980

Daniel Pender, M.D., published a research article in the June 2013 issue of *Otorinolaryngologia* titled, "A Geometric Appraisal of the Labyrinthine Membranes in Mammals." Dr. Pender currently practices otology in New York City.

Completed the Harvard Otolaryngology Residency Program in 1979

1979

Stuart H. Bentkover, M.D., attended the Las Vegas Cosmetic Surgery Symposium in June 2013, where he presented on "Restoring Ethnicity to the Nose" and participated in a panel entitled, "What I am doing now that I did not do five years ago, and vice versa?" Dr. Bentkover was also voted "Best Plastic Surgeon" in Worcester in the 2013 Worcester Magazine Reader's Poll. He also won this distinction in 2009, the last time the magazine had this category in its poll.

Completed the Harvard Otolaryngology Residency Program in 1966

1966

Charles W. Gross, M.D., was the 2013 recipient of the Walter Reed Distinguished Achievement Award from the UVA Medical Alumni Association and Medical School Foundation. This award recognizes professional accomplishments, outstanding innovation, and exemplary leadership in the field of medicine. He recently retired after many years practicing in the field of otolaryngology and maxillofacial surgery in Charlottesville, Virginia.

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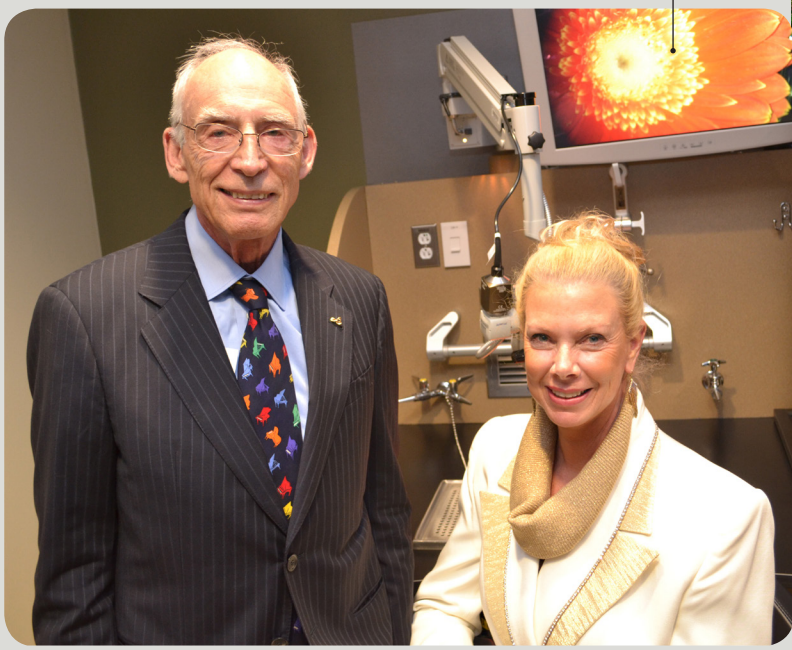
Dr. Silverstein and his wife, Beth Lynn, at the opening of the Joseph B. Nadol, Jr., M.D., Otolaryngology Surgical Training Laboratory at Massachusetts Eye and Ear Infirmary.

Harvard Otolaryngology alumnus Dr. Herbert Silverstein:

Delivering excellence in teaching, research, and clinical care through the Silverstein Institute in Sarasota, Florida.



1966 **Completed the Harvard Otolaryngology Residency Program in 1966**

At 38 years old, **Dr. Herbert Silverstein** was ready to retire.

After 10 years in academic otolaryngology that began with a residency at the Massachusetts Eye and Ear Infirmary, followed by a full-time Assistant Professor position at the University of Pennsylvania, Dr. Silverstein decided to take a leap by starting his own private practice in Sarasota, Fla.

"After 10 years of working 12 hours a day, seven days a week, I burned out. When I got down to Sarasota, I thought I was going to retire at 38. I thought I would do just a little bit of surgery, a little bit of this and that." Dr. Silverstein said.

The self-motivation he found over the ensuing four decades, during which he built the Silverstein Institute, has been a surprise to Dr. Silverstein himself.

But his story began in the halls of the Massachusetts Eye and Ear Infirmary, under the mentorship of former Chief and Chairman of the Department of Otolaryngology, Dr. Harold Schuknecht.

"It was a fantastic experience to be a resident under Dr. Schuknecht, who was so famous and exciting and stimulating. He had me working 12 hours a day and really enjoying it," Dr. Silverstein said.

As a resident, Dr. Silverstein was given a small grant by Dr. Schuknecht to develop the Walker Biochemistry Research Laboratory at the Massachusetts Eye and Ear Infirmary. He was able to hire technicians and to purchase the equipment he needed right away, without having to wait for funding. He acquired funding from the National Institutes of Health (NIH) for this research just a year later.

This generous gift from Dr. Schuknecht later inspired Dr. Silverstein to endow the Silverstein Young Investigator Award at the Massachusetts Eye and Ear Infirmary, which is given annually to young full-time academic investigators. Dr. Silverstein has also endowed research grants through the American Academy of Otolaryngology–Head and Neck Surgery and the American Neurotology Society.

"I felt that when I was a young doctor, I was given help to get started, and I wanted to endow some money to get a young investigator started while applying for grants, as Dr. Schuknecht had done for me," Dr. Silverstein said.

He also cited Dr. Schuknecht's influence in encouraging him to focus his career in otology on the study of Meniere's disease.

"He brought me into his office and said, 'Herb, you've got to be an expert in something. You've got to be a world expert in one thing, and I think you should be an expert on Meniere's disease.'"

Photograph by Curt Bowen >

Following the completion of his residency at the Massachusetts Eye and Ear Infirmary, Dr. Silverstein began a challenging career with the University of Pennsylvania. In 1974 he moved to Sarasota, Fla., to begin his career in private practice.

After arriving in Sarasota, he began collaborating in research with a Sarasota neurosurgeon named Dr. Horace Norrell, who had "retired at a young age" as well. Their work together was highly influential to the development of the field of neurotology. In 1976, Drs. Norrell and Silverstein hosted the first international meeting of neurosurgeons and otologists, the "Symposium on Neurological Surgery of the Ear," in Sarasota, Fla. The symposium was held annually for many years, leading to the establishment of the North American Skull Base and International Skull Base Societies.

"It really was the beginning of neurotology, or at least the beginning of neurosurgeons and otologists working together," Dr. Silverstein said.

In addition to bringing neurosurgeons and otologists together, Dr. Silverstein has stood up to other difficult tasks and has faced criticism in his career. Over the years he has developed surgical techniques and new technologies that leaders in the otology world were initially hesitant to accept, including the development of a facial nerve monitor/stimulator, performing a vestibular neurectomy through the posterior fossa instead of the middle fossa, sub-total resection of acoustic neuroma in elderly patients, the laser STAMP, and the MicroWick.

"Whenever you're paving the way for new things, you have to be willing to take criticism and to just do what you think is right," Dr. Silverstein said.

In 1979 he founded the Silverstein Institute, the culmination of his efforts to build a career in teaching, research, and clinical care in Sarasota, Fla. The Institute is comprised of four divisions: the Florida Ear and Sinus Center, the Premier Facial Plastic Surgery Center, Medical Hearing Systems (a business that dispenses hearing devices), and the Ear Research Foundation, a non-profit sponsoring a variety of clinical research projects.

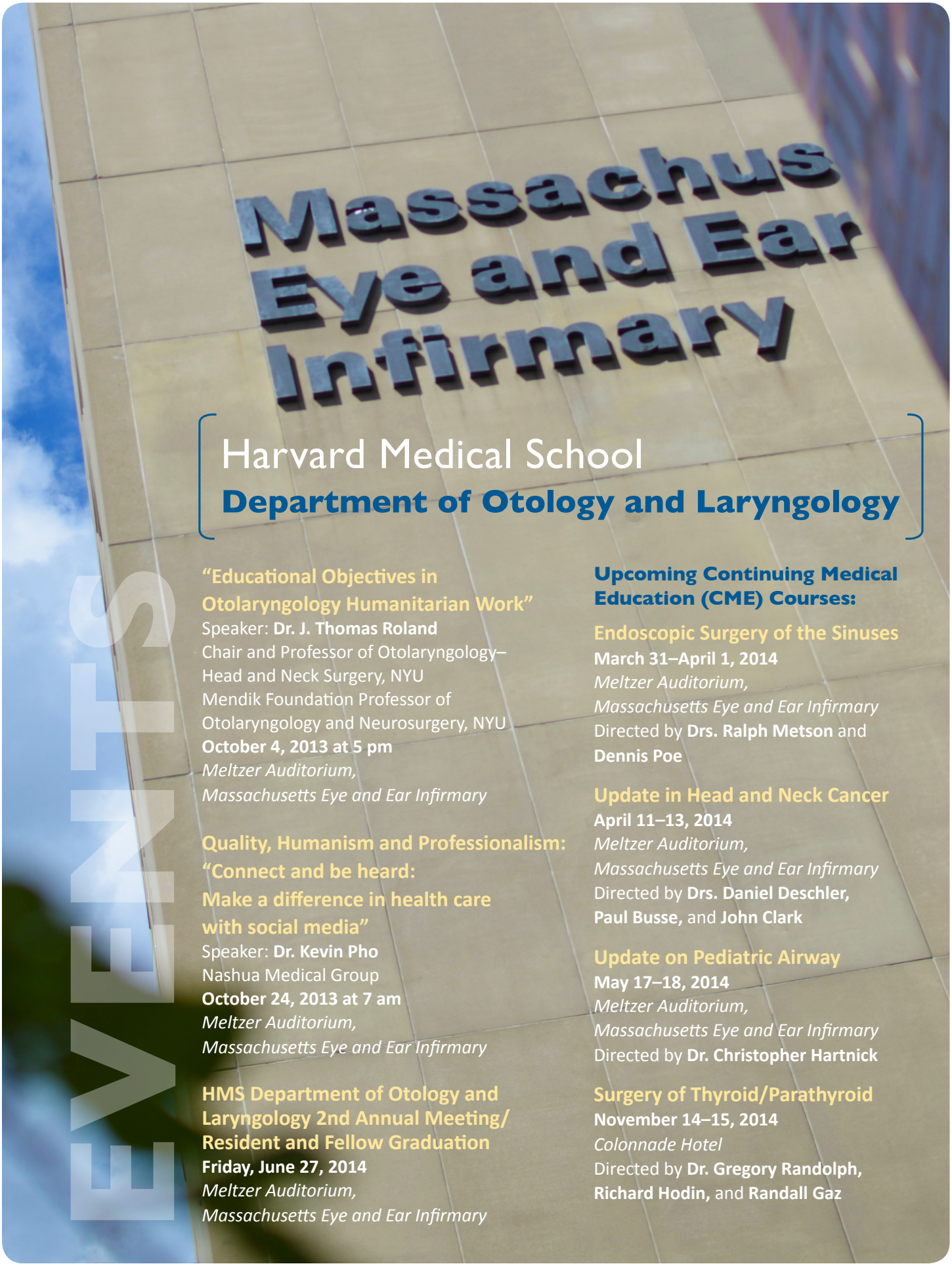
The Institute also offers a one-year post-residency fellowship program in neurotology. The program has just entered its 40th year, with 39 fellows having graduated from the program. Dr. Silverstein's first partner, Dr. Seth Rosenberg, is a former fellow from the program and currently serves as Vice President and Education Director for the Ear Research Foundation. Also a member of the practice is the first fellow to graduate from the Silverstein Institute, Dr. Jack Wazen, who currently serves as Director of Research for the Ear Research Foundation.

The Ear Research Foundation has three goals: education (through the fellowship program and frequent public lectures), community service, and research projects, mostly related to implantable hearing devices (cochlear implants and bone anchored hearing devices).

One way in which the Ear Research Foundation has raised money is through Dr. Silverstein's career as an accomplished jazz musician and composer. He recently composed his 50th song. He has produced 12 albums and co-authored a book entitled, Jazz Harmony and Improvisation. All proceeds from Dr. Silverstein's music go to the Ear Research Foundation.

Dr. Silverstein is currently a Clinical Professor of Surgery at the University of Pennsylvania School of Medicine and at the University of South Florida. He is a fellow of the American College of Surgeons and a member of numerous societies within the otolaryngology community. His work through the Silverstein Institute continues to grow every day.

"I don't think I would have progressed as far as I did if not for the Eye and Ear and Dr. Schuknecht. I owe it all to him and my other mentors there."



Harvard Medical School
Department of Otology and Laryngology

EVENTS

"Educational Objectives in Otolaryngology Humanitarian Work"
Speaker: **Dr. J. Thomas Roland**
Chair and Professor of Otolaryngology–Head and Neck Surgery, NYU
Mendik Foundation Professor of Otolaryngology and Neurosurgery, NYU
October 4, 2013 at 5 pm
Meltzer Auditorium,
Massachusetts Eye and Ear Infirmary

Quality, Humanism and Professionalism: "Connect and be heard: Make a difference in health care with social media"
Speaker: **Dr. Kevin Pho**
Nashua Medical Group
October 24, 2013 at 7 am
Meltzer Auditorium,
Massachusetts Eye and Ear Infirmary

HMS Department of Otology and Laryngology 2nd Annual Meeting/ Resident and Fellow Graduation
Friday, June 27, 2014
Meltzer Auditorium,
Massachusetts Eye and Ear Infirmary

Upcoming Continuing Medical Education (CME) Courses:

Endoscopic Surgery of the Sinuses
March 31–April 1, 2014
Meltzer Auditorium,
Massachusetts Eye and Ear Infirmary
Directed by **Drs. Ralph Metson** and **Dennis Poe**

Update in Head and Neck Cancer
April 11–13, 2014
Meltzer Auditorium,
Massachusetts Eye and Ear Infirmary
Directed by **Drs. Daniel Deschler, Paul Busse,** and **John Clark**

Update on Pediatric Airway
May 17–18, 2014
Meltzer Auditorium,
Massachusetts Eye and Ear Infirmary
Directed by **Dr. Christopher Hartnick**

Surgery of Thyroid/Parathyroid
November 14–15, 2014
Colonnade Hotel
Directed by **Dr. Gregory Randolph, Richard Hodin,** and **Randall Gaz**

Residents Drs. Regan Bergmark and Gillian Diercks at the midface plating course.

HARVARD Otolaryngology

An annual update from the Department of Otology and Laryngology at Harvard Medical School

243 Charles Street, Boston, MA 02114

Residents Drs. Matthew Naunheim, George Scangas, Pete Creighton, and Aaron Remenschneider at the midface plating course.