The Gift of Hearing for Yevgeniy

Delivery of patient-focused solutions has been the primary driving force behind research in the Department of Otolaryngology – Head and Neck Surgery,” says Dr. Steven Cheung, neuro-otologist and skull base surgeon at UCSF. “In the case of deafness, pioneering collaborative work in the Coleman Laboratory by Michael Merzenich, Robin Michelson, Robert Schindler, and their research teams translated basic research results in electrical stimulation of the inner ear to commercialization of a highly effective multichannel cochlear implant device,” he adds.

Successful translational research in deafness rehabilitation has positively impacted the lives of deaf children and their parents worldwide. More locally, the UCSF OHNS Division of Audiology, J. Andrew “Drew” Dundas, PhD, has joined UCSF as the Director of Audiology and Clinical Assistant Professor of Otolaryngology – Head and Neck Surgery following several years of work in research related to hearing loss and hearing aids at Starkey Hearing Technologies in Eden Prairie, Minnesota. Dr. Dundas received his PhD in Audiology and Biomedical Engineering from Vanderbilt University, and received his clinical training in Audiology at The Cleveland Clinic Foundation and the University of Akron.

Dr. Dundas’ research interests focus on the identification and development of new signal processing techniques and prescriptive methods for the fitting of hearing aids and assistive devices. He is currently conducting research to better understand the effects of different hearing aid fitting techniques on the perceptions of the individual. He is conducting this work using a combination of auditory system modeling and patient centered subjective sound quality and objective performance assessment techniques.

Continued on page 6
In keeping with the Spring Season, the Department of Otolaryngology – Head and Neck Surgery at UCSF is in a major renewal phase. In this issue, you will be introduced to several new faculty members. Drew Dundas, PhD, our new Director of Audiology replaces our mostly retired Robert Sweetow. It is exciting to have Drew on our faculty as he is filled with many innovative ideas for our Audiology Division. The Department also recently welcomed Frederick Rosen, MD, from Children’s Hospital and Research Center Oakland (CHRCO) to the UCSF faculty. We think this association portends an exciting opportunity for UCSF to improve service to the community and region in Pediatric Otolaryngology. Rick has been in practice in the East Bay since 2006 after he completed his fellowship in Pediatric Otolaryngology – Head and Neck Surgery at Lucille Packard. He will be a great asset and we are very excited and energized by the growth and future prospects of our partnership with Rick. The department is extremely excited and looking forward to having more new faculty join us later this year. We are fortunate to have recruited a new neuro-otologist and vestibular expert, Mia Miller, MD. Mia is completing her two year fellowship at UCSD and will be joining us in December. Our Chief of Facial Plastic and Reconstructive Surgery Dr. Dan Knott is so busy after just a year and a half on faculty that we needed to recruit a partner for him and Rahul Seth, MD will join us in August after completing his Facial Plastic Surgery and microvascular fellowship at UCLA. Finally, our search for a pediatric otolaryngologist is now closed and Dylan Chan, MD, PhD from Seattle Children's Hospital will be joining the UCSF Benioff Children’s Hospital and the Epstein Laboratory this summer.

ON THE EDUCATION FRONT, the department is strong as ever. We had an extremely successful Match and have accepted four residents this year. I will look forward to introducing our 2013-2014 team to you in our Fall communication. Our resident graduates this year are going on to excellent careers. Jonathan George, MD will do an oncologic surgery fellowship at The University of Texas MD Anderson Cancer Center. Megan Durr, MD will become a faculty member at Kaiser Oakland, and Kevin Burke is still deciding among several excellent opportunities in private practice. Steve Pletcher, MD is heading up our effort to be a pilot program for the Next Accreditation System in the field of Otolaryngology. The work we are doing as a pilot centers on creating milestones for skill acquisition that will provide the residents with improved feedback on their current state of development and learning. We think this new system administered by the ACGME will also allow us to enhance the program structure and to evolve the curriculum in a responsive manner.

Continuing Medical Education (CME) programs which we offer to our colleagues is a strong asset for the department and we have just completed some spectacular CME events. The Head and Neck Endocrine Surgery and Head and Neck Cancer Updates and Ultrasound Course run by Drs. Lisa Orloff and Steve Wang were extremely well attended. The UCSF Temporal Bone Dissection Course managed by Drs. Lustig and Cheung used our Robert Schindler Classroom and was very successful. As always, the UCSF-Penn Sleep Course run by Drs. Andy Goldberg and Eric Kezirian in Orlando, Florida was extremely well attended. The Pacific Rim Otolaryngology Update in Hawaii jointly sponsored with the Tripler Army Hospital faculty in Hawaii headed by Dr. Joe Sniezek was a very high quality course at which Dr. Jeff Spiegel from Boston University (UCSF, ’99) provided several memorable outside-the-box lectures.

AS I THINK ABOUT ALUMNI, I am always proud and amazed at the achievements of our graduates. In our very first alumni spotlight, please read about Nadim Bikhazi, MD (UCSF ’98). Nadim has created a remarkable career in Ogden, UT, after leaving UCSF. It is always a pleasure to hear and share stories from our alumni. Their feedback allows us to continually develop and improve the training experience at UCSF for our current and future residents and fellows.

Great education and training is one of the many reasons why we continue to host annual named lectures which are made possible by special donors. Each lectureship offers unique medical insight and inspires innovation offering trainees and faculty the most up-to-date information on medical science, surgical technique, and technology. The department is indebted to Richard and Helen Elkus for their support. This year’s laryngology lectureship by Clark Rosen, MD, honors Mrs. Elkus’ father, Dr. Lewis Francis Morrison. Mr. and Mrs. Elkus’ personal mission is to build awareness and education around voice and swallowing issues, a mission that UCSF OHNS has embraced for two decades.

FINALLY, I MUST MENTION OUR INVIGORATED RESEARCH STANCE. Several of our scientists are highlighted in this newsletter including Brian Malone, PhD who works in hearing research from a neuroscience and auditory processing perspective. Also, you can read about work being done by John Houde, PhD who has partnered with Dr. Mark Courey in concert with scientists from radiology to enhance scientific discovery in the field of dystonias.

I hope to see those of you who are former residents and all physicians who read this at our Francis A. Sooy, MD Graduation Event on June 22. This year our Sooy Guest Professor is pioneering endoscopic skull base surgeon Carl Snyderman, MD from the University of Pittsburgh. Our graduation lectureship is a great time for reunions, but, of course, I welcome friends and philanthropic partners of the Department of Otolaryngology – Head and Neck Surgery to visit us any time.

Warmly,
Andrew H. Murr, MD
Interim Chairman and Professor
Because you need a voice to speak, voice disorders can be extremely debilitating, and they can be brought on by many different causes. Naturally, the cause of most voice problems is in the voice box (e.g., damage to the vocal cords or vocal nerves), but for one serious voice disorder, spasmodic dysphonia, the cause is actually more likely to be in the head. OHNS Professors John Houde and Mark Courey, who, along with Professor Srikantan Nagarajan in the Department of Radiology and Biomedical Imaging, are investigating the possibility that the causes of spasmodic dysphonia actually arise at the highest levels of the central nervous system (CNS).

Spasmodic dysphonia (SD) is a disorder of voicing where the muscles of phonation enter a state of intermittent spasm that prevents them from vibrating properly during speaking. Little is known about what causes SD, and treatment is currently limited to partial disabling of the vocal muscles, by either repeated injections of botulinum toxin or surgical sectioning of vocal nerves. But SD is known to be similar in many ways to a movement disorder called focal hand dystonia (FHD, or “writer’s cramp”), whose cause has been traced by OHNS Professor Emeritus Michael Merzenich and Professor Nancy Byl of the Department of Physical Therapy to be in the higher CNS. Drs. Merzenich and Byl have shown that focal hand dystonia may be due to overreactions to sensory feedback in the cortical systems governing movement, and now professors Houde, Courey, and Nagarajan are investigating whether similar abnormal responses to sensory feedback leads to SD.

In the first phase of their project, they are using functional imaging methods, magnetoencephalography (MEG), and functional magnetic resonance imaging (fMRI), to study neural response to perturbations of the auditory feedback heard during speaking. Using a system developed by Professor Houde that alters pitch in ongoing speech, the study compares responses to pitch feedback perturbations in normal speakers and patients with SD. The results have been encouraging: in SD patients, there are areas in auditory cortex that have aberrant audio feedback responses. In the next phase of the project, they will use transcranial magnetic stimulation (TMS) to directly test whether reducing activity in these areas reduces SD symptoms in patients. In this way, the results from the project will not only help determine whether the Merzenich/Byl hypothesis explains the cause of SD, but may also help to define a more non-invasive method of treatment.

LEFT: SD patient responds to a pitch feedback perturbation. When the patient hears the pitch of his/her speech suddenly lowered (blue: pitch the patient heard) he/she compensates by raising his/her pitch (red: pitch the patient produced).

RIGHT: SD patient’s neural response to this feedback perturbation, as revealed by MEG. Red pixels show an area in auditory cortex that responds to the pitch perturbation. This area is a target for using TMS to suppress SD symptoms.
New Faculty and Directors

Continued from front page
His clinical focus resides in the assessment and treatment of hearing loss in adults.
A native of Mississauga, Ontario, Canada, Dr. Dundas met his wife Dr. Laura Ivey Dundas while they were studying Audiology together at the University of Akron. They are proud parents of two young boys and a Weimaraner. In his spare time, Dr. Dundas enjoys woodworking, sailing, tinkering with old cars and starting (if not finishing) home improvement projects.

Frederick Rosen, MD
Medical Director, UCSF Pediatric Otolaryngology at Children’s Hospital Oakland

Dr. Rosen has been practicing pediatric otology at the University of Texas before returning to the Bay Area for a two-year fellowship in pediatric otology at Stanford. Presently, he lives in Alameda with his wife and two young children.

Dr. Rosen enjoys practicing the full breadth of pediatric otolaryngology. Particular areas of interest include, but are not limited to, pediatric airway, velopharyngeal insufficiency, and endoscopic sinonasal and skull base procedures.

Brian Malone, PhD
Assistant Professor, John C. and Edward Coleman Memorial Laboratory

The Department is pleased to welcome new research faculty, Assistant Professor Brian Malone, PhD.

Dr. Malone is a member of the Department’s John C. and Edward Coleman Memorial Laboratory.

Dr. Malone received his undergraduate degrees in philosophy and English, with a concentration in neurosciences at Williams College. He completed his doctoral work with Dr. Malcolm Semple at the Center for Neural Science of New York University. His doctoral thesis, “Adaptive gain control in the central auditory system,” explored the effects of stimulus context on the neural representation of dynamic sounds. Following his PhD, he took a position as a postdoctoral fellow in the Department of Neurobiology at the David Geffen School of Medicine at UCLA, working with Dr. Dario Ringach on receptive field dynamics in primary visual cortex.

Dr. Malone’s future research in the Department of Otolaryngology – Head and Neck Surgery will directly examine how the nonlinear properties of auditory responses contribute to the processing of communication signals embedded in noise.

Dr. Malone’s overall goal is to understand the fundamental neural coding principles that enable robust speech comprehension in challenging listening environments. By pursuing basic research on this issue, Dr. Malone hopes to use the knowledge gained to guide the development of novel therapeutic approaches to communicative disorders, such as algorithms for speech enhancement in hearing aids, and stimulation protocols for neural prosthetic devices for hearing.

Joyce Komori, RN, MSN
Clinical Administrative Director

Joyce Komori, RN, MSN, joined the Department of Otolaryngology – Head and Neck Surgery last July. Her leadership style can be summed up in one Japanese word: ‘kizukau’ (pronounced KEE-Zu-Kau), which she explained is “a Japanese word or philosophy that means to worry about or be considerate of something before it is said.” It is through ‘kizukau’ which led her to a career-path in nursing in hope to transfer this way of thinking from bedside to boardroom.

Ms. Komori received her undergraduate degrees in psychology and nursing, and a Master’s Degree in Health Care Administration from the University of Pennsylvania. Most of her clinical experience as an RN came from working at Children’s Hospital of Philadelphia in highly specialized inpatient units and suburban primary care outpatient offices. She has worked as an RN at the Children’s Hospital of Philadelphia and was a faculty instructor at the University of Pennsylvania, teaching finance in the masters’ nursing leadership and healthcare administration program.

Prior to joining UCSF, she led the operations of the Walgreen’s Take Care Clinics from its start-up stages through acquisition to growing the company from 50 to 350 clinics nationally. In her leadership role, she used the philosophy of ‘kizukau’ to anticipate and address the needs of a burgeoning convenient care industry: developed a shared governance committee to ensure the successful implementation of standardized policies and procedures; developed an open-access patient scheduling system; and implemented market-driven service options that offered quality, convenient and affordable care to consumers. She was the
business architect and strategist for Walgreen’s proprietary electronic medical records system (EMR) to meet the needs of her providers. By anticipating and recognizing the quality and outcomes-based data reporting required for health-IT standards and reimbursements, she developed a system interface that integrated and met interoperability standards for various external referring health organizations.

Ms. Komori has made a tremendous impact on the clinical business operations for OHNS. In the first two months of her new position, Ms. Komori facilitated the introduction and implementation of UCSF’s new APEX/Epic EMR and ensured that every provider and nursing staff member was well prepared for the go-live in September. In the following months she worked diligently to redefine nine key positions within the clinical administrative staff by streamlining roles and responsibilities, promoting top-talent from within UCSF and bringing in external talent to complement the existing support staff. Recognizing that caring and ‘kizukau’ have profound effects on productivity, she made colleague engagement her primary driver to improve clinical operations and to further support the department’s mission to improve patient access. In collaboration with the leadership team, including Interim Chair Dr. Andrew Murr, Department Manager Cathy Garzio, and Medical Center Director Monica Seay, she has developed data dashboards related to patient access. As a result, divisions have implemented operational changes to referral processing which has shown improvement in provider slot utilization and patient volume. Her goal for the next year include focusing on improving the patient and colleague experience by examining key trends in engagement data, patient access, and continuing to implement effective scheduling strategies.

Elkus Gift Honors Legacy of Dr. Morrison

The Lewis Francis Morrison, MD, Endowed Lectureship in Head and Neck Surgery

The Lewis Francis Morrison, MD Endowed Lectureship in Head and Neck Surgery is a gift that began with a love story. When Richard J. Elkus Jr., (Dick) was 16 years old, he knew that Helen Morrison was ‘the one’. “We’d been dating since 1951. I told Helen I was going to marry her once I turned 21.” True to his word, by their wedding day, he’d also come to cherish her family, particularly her father, Dr. Lewis Francis Morrison, clinical professor and Chairman of the UCSF Division of Otolaryngology – Head and Neck Surgery (1945-1956).

“I just adored him,” says Dick, who was fascinated by his father-in-law’s passion for science. Dr. Morrison’s sudden death from a heart attack at age 56 left both newlyweds devastated. It would be decades before the couple found the perfect way to honor the man they both loved and his remarkable legacy as a teacher and otolaryngology trailblazer.

Maintaining close ties to Dr. Morrison’s department, in 2004 the couple attended an event that gave Dick an idea. “Helen, I’m going to give you a little gift,” he told his wife. After discussing requirements for an annual lecture series with the department chair, Dick agreed to commit to the gift, stipulating that Helen should work out the details.

Those details include the flowers for the post-lecture dinner. Dick explains, “Lew Morrison was madly in love with Helen’s mom. As a show of affection for her, every single night without exception, there was a plate of floating gardenias on the center of the dining room table.” Gardenias grace the tables of the dinner that follows the lecture, for Helen invoking the presence of her father.

“Helen and I are devoted the University,” stresses Dick. As for Helen, a note she penned to the department chair after the inaugural lecture in 2007 says it all: “After forty-nine years, we finally feel that my dad’s life will be celebrated as it should be.”

The Department of Otolaryngology – Head and Neck Surgery was proud to host Clark A. Rosen, MD, FACS, Director of the UPMC Voice Center and Professor of Otolaryngology from the University of Pittsburgh School of Medicine, as the 2013 visiting professor for the Lewis Francis Morrison, MD lectureship. Dr. Rosen’s talk was on “Pro-Active Treatment of Vocal Fold Paralysis.”
Balance and Falls Center, and the UCSF Cochlear Implant Center strives to offer the highest quality care to our patients and their families by offering a wide range of options to patients with partial or complete hearing loss. With advancements just in the last decade, the UCSF Cochlear Implant Center can now offer cochlear implant options to deaf patients as young as 6-months old.

As of now, Yevgeniy (pronounced Yev-GEN-nee) “Yev” Barkalov is still considered Dr. Cheung’s youngest patient. He received his first cochlear implant at two years old. It was one of the first models, connected to a battery pack and magnet through a cord leading to a back-strapped processor. Yev’s mother Olga Barkalova said, “When we turned the implant on for the first time, we waited for him to respond. As soon as he heard the first sounds made in the room, he cried! Then we all cried!” At the age of five, Yev received his second cochlear implant and it opened up a whole new way of life for him and his family. “We wanted Yev to have the potential to live his life fully,” said Mrs. Barkalova. Yev is a gifted learner in math and science. “I think that with the hearing loss, Yev has developed a natural habit to work hard for things,” says Mrs. Barkalova. Yev just completed his 8th grade level mathematics course through Stanford’s Online Education Program for Gifted Youth (EPGY). Yev is not only active in education but he also participates in sports, outdoor activities, science camps and art classes. In February, he received two brown belt 2nd Place medals and one 3rd Place medal at the 5th Annual Wine Country Karate Open. When asked about his thoughts on whether he ever felt handicapped because of his implants, his response was amazingly mature. With conviction he said that, “Having cochlear implants is the best thing that could have happened to me. I love it because #1, I make a lot of friends because everyone seems to want to ask me what they are; #2, I get great sleep, nothing wakes me up in the middle of the night; and #3, If I don’t like what I hear, I just turn the world ‘off’. It’s absolutely great! The only trouble I really get with the implants is when my friends and I have really big water fights!”

Currently at age twelve, Yev wears a more updated cochlear implant technology. When asked about how it all works, ‘Professor’ Yev explained it not just with enthusiasm, but with charm, “…this small piece here attaches to a processor with tubes that fits over my ears. Dr. Polite, who is also very polite, programmed the processor just for me. It filters and transmits sound to my cochlear implant through this cord and attaches to my head like a regular magnet which I can easily take off. Like this…” Between his advocate-self and his spontaneous comedic stanzas, Yev’s contagious energy and zest for life makes him so much fun to be around. When asked about what he wants to be when he grows up, Yev said he wants to become a doctor. He truly enjoys speaking to other hearing impaired young people. As of now, Yev is one of the many inspiring cochlear implant patients seen at the UCSF Cochlear Implant Center. He came to UCSF at 20-months of age, about 6-months after hearing aids failed him. In a desperate desire to communicate with her child, Mrs. Barkalova took up sign language (ASL) right after learning that Yev had lost his hearing completely. In a short time, Yev’s achievements were astonishing. At 24-months of age, right before Yev received his first implant, he was already able to sign six different things – milk, more, drink, car, love, and open. This turned out to be a clue for the exceptional intellectual potential that was just waiting to be revealed in this once very quiet child. Yev’s development is attributed to tremendous support given from UCSF and other hearing and speech services. Most of all, it is Mrs. Barkalova’s tireless energy to seek out only the best care and to provide home-schooling for Yev which helped to transition him smoothly into the mainstream school system. “He is now where he should be for his age group. I am very proud of him,” said Mrs. Barkalova. Yev is a gifted learner in math and science. “I think that with the hearing loss, Yev has developed a natural habit to work hard for things,” says Mrs. Barkalova. Yev just completed his 8th grade...
people like him and is captivated by the mysteries of the life sciences. “I might even want to become a medical examiner one day!” he joyfully declared.

When first asked about Yev, Audiologist Colleen Polite’s face lit up. “How can I not remember Yev? At each yearly exam, he always tries to take home the plush monkey doll from our office!” Dr. Colleen Polite is the Assistant Director of the UCSF Cochlear Implant Center, and lead coordinator for the Annual Cochlear Implant Picnic held yearly in August. At this summer event, current and prospective cochlear implant patients meet and learn more about recent cochlear implant technology and lean on one another for ongoing support. “Oftentimes, patients who initially have implants feel very much alone. It really makes my work even more rewarding to offer opportunities like the annual picnic to help patients reach out to one another. I also enjoy staying connected with our patients,” said Dr. Polite. In reflection she smiled and said, “I am always amazed by our patients. Every one that comes to the Center has their own remarkable and unique story.” She finds it very hard to forget any patient she meets.

“Yev is certainly living proof of how effective it can be to combine parent education, medical research, social service partnerships and timely surgical interventions. It beautifully transforms a challenge into a rich and meaningful life experience,” added Dr. Polite.

When asked about how Yev’s life-changing experience affected Mr. and Mrs. Barkalov and their children, Olga said with passion, “UCSF gave my son hearing, and that is the best gift any parent could ever ask for. It made me realize that there really is nothing that is impossible if you try hard enough. ‘Impossible’ is just a word. If you just put an apostrophe between the letters ‘I’ and ‘M,’ it reads ‘I'm Possible’ — and that is what I tell myself every day!” It’s pretty clear where Yev’s amazing, persevering and enlightening personality comes from!

Alumni Profile

You Are Surrounded by Inspiration

Where have 15 years gone? After graduating in 1998 from UCSF Otolaryngology, I stayed on one year as clinical faculty at UCSF before relocating to Ogden, Utah joining a multispecialty group, the Ogden Clinic. My attention outside of my clinical practice has focused on governance issues as I am on the Board of Directors. This has sharpened my focus on a whole variety of administrative problems that we tackle frequently. Health care reform, electronic medical records, quality metrics are surprisingly now part of my lexicon!

My current clinical research has focused on work with balloon sinuplasty and participating in the development of a resorbable chitosan sinus pack.

I also now teach a course at the Academy on negotiating otolaryngology contracts for graduating residents. I believe that while much of our training in residency was dedicated to the clinical aspects of otolaryngology, there was very little emphasis on the business of medicine. In the course we focus on specific topics like restrictive covenants, overhead allocation, and initial salary expectations. It gives me joy to be able to help residents sift through these murky and trying contractual issues.

Fond remembrances from residency include the close camaraderie we all shared. I was always inspired by those spectacular residents that went before me and taught me so much. I still appreciate and can often hear the voices of my attendings, Roger Boles, MD, Kelvin Lee, MD, Andrew Murr, MD, Steve Cheung, MD, and Robert Schindler, MD counseling me on surgical technique and disease management. The pearls of wisdom I learned truly will last a lifetime. I specifically want current residents to know about Dr. Kelvin Lee, who passed away in 2005. He paid particular attention to the well-being of his residents and was always willing to stand up for them. His encouragement and confidence in us affected us greatly. He was a great human being and his legacy endures in all of his graduates.

My wife Karen and I enjoy our three children: Lauren 13, Olivia 11, and Noah 5. Much of our time is spent running between karate, voice lessons, and piano. To see the world through their wondrous eyes motivates me to stay young and energized. My outside interests include fly fishing, skiing, and painting.

A final word needs to be underscored to UCSF Otolaryngology residents: appreciate the time you have at UCSF; it is a special place with gifted medical professionals surrounding you who teach and inspire you daily.

Alumni can stay in touch with the department and network with other graduates of the Department of Otolaryngology – Head and Neck Surgery by creating a member profile through http://ucsfalumni.org/ohns.
Upcoming Events

- **Roger Boles, MD Lecture**  
  SEPTEMBER 12, 2013  
  Carol Bradford, MD; Professor and Chair, Otolaryngology – Head and Neck Surgery, University of Michigan

- **UCSF Otolaryngology Update**  
  NOVEMBER 7-9, 2013  
  Ritz Carlton Hotel, San Francisco

For more information about events and continuing education offerings, please visit [http://ohns.ucsf.edu](http://ohns.ucsf.edu) and [http://cme.ucsf.edu](http://cme.ucsf.edu).

Dr. Knott Receives Teaching Award

Since 1969, the premier teaching award at UCSF has been the Kaiser Award for Excellence in Teaching. This award allows medical students and residents to acknowledge and recognize those teachers who are extraordinarily talented and who are making a major difference in their education. The award is an institution-wide teaching award and is extremely prestigious especially because UCSF is known for its highly innovative education focus. This year, the selection committee received 83 nominations for the award. We are especially proud that the 2013 recipient of the Kaiser Award for Excellence in Teaching (In-Patient Care Setting) is Dr. P. Daniel Knott, MD. Dr. Knott is an Associate Professor and Chief of the Division of Facial Plastic and Reconstructive Surgery at UCSF. Dr. Knott is the first Otolaryngologist – Head and Neck Surgeon to be honored with the Kaiser award at UCSF and we are thrilled that he has been so recognized. Congratulations, Dan!! Way to go!