Message from the Chairman

We are pleased to present the Fall/Winter 2011 edition of Heads Up!, the UCSF Otolaryngology – Head and Neck Surgery newsletter. This edition highlights several exciting developments including an update on our clinical enterprise and the expansion of our resident complement, the launch of a new hospitalist program in otolaryngology unique nationally, and the expansion of our services at San Francisco General Hospital. Please join me in welcoming our newest faculty members Andrea Hasenstaub, PhD, P. Daniel Knott, MD, Marika Dubin Russell, MD, Matthew Russell, MD, and William Ryan, MD. We are also very pleased to announce the successful recruitment of our new Development Officer, Justin Marsh, who is featured in this issue.

Dr. Hasenstaub, a distinguished systems neuroscientist, comes to us from the Salk Institute and will be joining our basic research program in the area of cellular neurophysiology and neural circuit analysis in the central auditory.

A New Chapter About to Begin

By now, many of you have heard that after nearly a decade of remarkable success as Chairman, David W. Eisele, MD, and his family have decided to move back to Baltimore, MD. Dr. Eisele is returning to Johns Hopkins University, this time as the chairman of their Otolaryngology – Head and Neck Surgery Department. While the UCSF community will truly miss Dr. Eisele and his wife, Janice, who has served in the University Development and Alumni Relations unit and raised significant gifts in support of UCSF efforts, we are focusing on celebrating the amazing work that they have accomplished. Dr. Eisele has brought UCSF’s Otolaryngology – Head and Neck Surgery Department to great heights in research, patient care and education. His leadership has resulted in growth of the Department through the addition of 18 new faculty members. Under his guidance, the Department has been given over $13 million in philanthropic contributions to support the innovative activities and research that Dr. Eisele spearheaded and guided – not to mention the incredible number of grants that were awarded to the Department during this period. UCSF, the patients we serve, and all those who will benefit from the research and training efforts that have occurred during Dr. Eisele’s tenure will be forever grateful. We wish Dr. Eisele, Janice and their daughters much happiness and success in Baltimore and beyond. Thank you for your tireless efforts, Dr. Eisele.
I am proud to share that our clinical breadth and depth has never been stronger as our clinical coverage and excellence accelerates. Beginning in July 2011, we now have 22 full time clinicians practicing in all areas of Otolaryngology – Head and Neck Surgery.

Our new Chief of facial plastic surgery, P. Daniel Knott, MD, from Cleveland Clinic arrived this summer. An expert at cosmetic surgery, Dan is also a senior microvascular and reconstructive expert. He is innovative, and will be an extremely exciting addition to our clinical service and our educational program.

We are very pleased to have Will Ryan, MD joining us in the Division of Head and Neck Oncology. Will completed his head and neck fellowship here having previously finished his Otolaryngology – Head and Neck Surgery training at Stanford University. Will has become familiar with robotic surgery, in partnership with Steve Wang, MD, and is an outstanding clinical researcher and teacher.

The department has also recently hired the Russell team. Drs. Matthew and Marika Russell were both Chief Residents at UCSF. They are both outstanding and talented clinicians and we were very fortunate to have attracted both to our department, albeit, in different roles. Matt will concentrate on quality issues in collaboration with Bob Wachter, MD (author of Internal Bleeding), and create a new paradigm in quality hospital care that we think will set a new standard of excellence.

Marika, on the other hand, is joining the department as a part time physician at San Francisco General Hospital (SFGH). The department has been successful in expanding its funding for faculty, as a result of our increased workload and responsibility at SFGH coincident with the Healthy San Francisco program. Marika has an interest in trauma, outcomes research, and underserved communities, and will have an outstanding career at UCSF.

We are poised to have 25 full time clinicians in the department in 2012! We have thriving programs in endoscopic skull base surgery (Dr. El-Sayed), rhinology and sinus surgery (Drs. Goldberg, Pletcher, El-Sayed, and Murr), a world renowned and innovative endocrine surgery program (Dr. Orloff), an internationally famous laryngology and professional voice practice (Drs. Courey and Yung), and truly transformational work being accomplished in sleep apnea medicine and surgery and research (Dr. Kezirian). Our otology division under Dr. Larry Lustig is extremely busy clinically; from a research perspective, we recently obtained new NIH funding to support Dr. Steve Cheung’s work. Our new UCSF Benioff Children's Hospital broke ground last fall and is being rapidly constructed on schedule to open in 2015. Our pediatric surgery team of Drs. Kristina Rosbe (director) and Anna Meyer are bringing a very high level of skill to pediatric otolaryngology care never before seen at UCSF through their devotion and dedication to their field. Our city’s brand new general hospital is being built on schedule right before our eyes and is scheduled to open in 2014. Our new Cancer Hospital at the Mission Bay site is shaping up to be spectacular.

Finally, the department has been successful in expanding the residency program with a complement increase newly approved by the ACGME. This year we had one of the best matches in recent memory and now have four PGY-1 residents joining us for training rather than three. We have welcomed Dan Faden and Shethal Bearelly from Boston University, Jeff Markey from the University of Kansas, and Megha Parekh from Georgetown University and UCSF. Our residency has a great spirit and the training program is outstanding; yet we are constantly striving to improve.
HNS Faculty Member Matthew Russell, MD, began work this summer as what may be the first Otolaryngologist in the country to practice Hospital Medicine. This recently developed specialty of “Hospitalist” focuses on the medical care of acutely ill hospitalized patients – making access to specialists more readily available to patients already in the hospital. UCSF’s Robert M. Wachter, MD, is a pioneer in recognizing the need for and naming this field, and he now serves as the Chief of the Division of Hospital Medicine for the UCSF Department of Medicine. Hospitalists represent one of the most rapidly growing forms of medical practice in the United States and roughly 30,000 hospitalists currently practice in North America.

Dr. Russell’s duties as Hospitalist will include consultations across different hospital wards to provide assistance with complex airway issues. He will also perform surgeries and work on quality improvement initiatives, patient safety and systems-based practices. To note what a purely inpatient setting can deliver to improving patient care and efficiency, Dr. Russell quotes statistics from a two-year pilot program UCSF ran before hiring him as a full-time Hospitalist. In the program’s first year alone, the service saw 300 inpatient consultations (not including emergency and urgent care). The most common consults were sinonasal and laryngotracheal, which translated to needs for surgical procedures for patients who would otherwise have needed to wait to have a specialist scheduled to come in and see them in the hospital setting.

“The hospitalist movement, in general, fills a need for the acute-care setting and manages a different set of problems than is seen in the ambulatory clinics,” Dr. Russell said.

While the Otolaryngology Hospitalist is not yet an established position in many medical centers, our study’s data points toward it being a good fit for UCSF and we are very pleased to have Dr. Russell leading this effort on behalf of OHNS.

Dr. Matthew Russell breaks new ground as a full-time Otolaryngology Hospitalist.
The biggest gains in the future for surgical and therapeutic treatments of head and neck cancer will likely include the use of imaging techniques, radio-enhancers and drug delivery vehicles that are really, really small.

The first nanostructure, the “buckyball,” was created in 1985 from just 60 carbon atoms; elongated carbon nanotubes, which quickly found a place in composite materials, soon followed. In medicine, taking a cue from the hollow buckyball construct, the drug Doxil was created in 1995 by loading the chemotherapeutic doxorubicin within a lipid nanoparticle. To get an idea of nanomedicine’s scale, consider the fact that mammalian cells are typically 2,000-10,000 nm, and cellular organelles range from 100 to 300 nm, while nanoparticles are often 50 nm or less.

Small and Shiny

Surgeon and nanotechnologist Ivan El-Sayed, MD, associate professor in the Department of Otolaryngology – Head and Neck Surgery, just published a review of the topic as it relates to gold nanoparticles (Curr Oncol Rep. 2010;12(2):121-128). Dr. El-Sayed’s interest focuses on several potential applications, imaging in particular, and the nanoparticles in question are indeed made of gold. “Gold is very interesting because it has extraordinary optical properties,” he explained; it is able to scatter or absorb light, and, critically, both of these phenomena can be detected and are capable of providing in vivo information. Further, gold absorbs different wavelengths of light that, depending on the wavelength, may result in the particles giving off heat to the surrounding tissue or even ionizing radiation.

So what does this mean for head and neck cancer patients? The applications include tissue imaging, photothermal ablation of tissues surrounding a gold nanoparticle, radiation enhancement and drug delivery (an ability inherent to the scale of nanomaterials in general). Taken in reverse order: A tumor-targeted gold particle coated with tumor necrosis factor alpha is currently the subject of a phase I clinical trial. For radiotherapy, due to gold’s absorption properties, “we could actually reduce the dose of radiation that we have to give to the patient,” Dr. El-Sayed said, “but still have effect at the tumor site, meaning that we might be able to re-radiate down the road.”

Photothermal ablation of tissue is also a possibility, with the potential to overcome tumor drug resistance when used with chemotherapy.

Finally, consider imaging. “If you had a contrast agent to label the cells, that would really improve our ability to decide where to end the surgical margin,” which is extremely important not only for a cure, but also to reduce the impact of what can often be disfiguring procedures, Dr. El-Sayed said.

Targeting is Key

Key to the realization of these goals is successful targeting. “My day-to-day focus is to figure out how to functionalize the particles so that they can be used in these various biological applications,” Dr. El-Sayed said. Of the possible mechanisms to explore, the epidermal growth factor receptor (EGFR), a target that is over expressed in 90 percent of oral squamous cell carcinomas, seems the best bet. “The nanoparticles will still have to travel through a number of (physiologic) barriers to reach the target,” said Dr. El-Sayed. He’s convinced, however, that nanotechnology in head and neck cancer is not an “if” but a “when.”

Dr. Ivan El-Sayed; at right: gold nanoparticles stick to cancer cells and make them shine; inset: gold nanoparticles do not stick as well to noncancerous cells – the results can be seen with a simple microscope.
Exciting Breakthrough in Tinnitus Treatment

Tinnitus is an auditory disorder characterized by perception of internally generated phantom auditory sensations without corresponding mechanical stimuli arising from the body or external environment.

Current auditory based treatment approaches, sometimes in conjunction with nonauditory based strategies, such as Tinnitus Retraining Therapy and Cognitive Behavioral Therapy, have been helpful in mitigating symptoms for the majority of patients. Yet there are over 1 million tinnitus sufferers who still endure troublesome chronic, continuous head noises that are debilitating and interfere with activities of daily living.

Department Faculty Dr. Steven W. Cheung and Dr. Paul Larson have now shown and published in prestigious journals that the application of deep brain stimulation (DBS) therapy to a locus of caudate neurons (area LC) in the body of the nucleus, a subsite of the striatum that is not part of the classical auditory pathway, can decrease or increase tinnitus loudness perception.

Looking to prove that this treatment could indeed provide relief, Drs. Cheung and Larson sought a procedure that already involved reaching these areas of the brain. Discovering the fact that some people with Parkinson’s disease get electrodes surgically implanted in their brain stem to control their symptoms provided the opportunity to see if there could also be hope for tinnitus relief. Cheung and Larson engaged five Parkinson’s patients preparing to receive an implant who also suffered from tinnitus. The patients agreed to undergo several minutes of deep brain stimulation to these regions during surgery as the electrode was being implanted. Cheung and Larson discovered and have reported that the tinnitus became much fainter in four of the five patients.

This is truly an exciting discovery in the treatment of tinnitus. For more information, please visit our website at http://ohns.ucsf.edu.

Dr. Steven W. Cheung Dr. Paul Larson

Honors & Awards

Basic Science and Clinical Awards
- American Head and Neck Society Pilot Research Grant – Osamu Tetsu, MD, PhD, Regents of the University of California: San Francisco “Improvement of EGFR Targeted Therapy for Salivary Gland Adenoid Cystic Carcinoma.”
- John Houde, PhD – R01 “Neuroimaging of Speech Motor Control,” June 2010
- Ben Bonham, PhD – University of California Discovery Award, “Improving customized fitting of cochlear prostheses,” September 2011
- Dieter Gruenert, PhD – UCSF Institute of Human Genetics Program Project Grants: 2 awards, October 2011

Resident Awards
- Kelvin Lee Resident Award 2011 – Eli R. Groppo, MD
- The 27th Annual Bay Area Residents’ Research Symposium in Otolaryngology – Ilya Likhterov, MD, and Megan Durr, MD, shared the prize for best clinical study. Kevin Huoh, MD, share the prize for best case report.

Faculty Teaching Awards
- Sooy Award for Clinical Excellence 2011 – David W. Eisele, MD
- Boles Award for Teaching Excellence 2011 – Andrew H. Murr, MD
The Department Welcomes Five New Faculty

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Andrea Hasenstaub, PhD

Dr. Andrea Hasenstaub will join the John C. and Edward Coleman Memorial Laboratory in our Department as Assistant Professor and will also be a member of the UCSF Center for Integrative Neuroscience and the UCSF Neuroscience Graduate Program.

Dr. Hasenstaub received her undergraduate degree in mathematics and engineering at the California Institute of Technology, a master of philosophy at Cambridge University, England, and a PhD in neurobiology at Yale University. With her thesis advisor David McCormick she published a series of seminal papers about the influence of fast-spiking inhibitory interneurons in the cortex on the excitatory-inhibitory balance and synchronization of cortical activity. Following her PhD, she took a position as Junior Fellow at the Crick-Jacobs Center for Theoretical and Computational Biology at the Salk Institute, La Jolla. There, among other projects, she developed novel computational methods to characterize genetically different types of inhibitory interneurons in auditory cortex.

Her research at UCSF will focus on the link between basic cortical network function and its behavioral expression in normal and impaired hearing. Both peripheral hearing loss and normal aging are associated with profound changes in auditory cortical structure and function. Psychophysically, both aged listeners and listeners with noise-induced hearing loss experience hearing impairments, which are particularly marked for tasks requiring rapid temporal processing and performance in background noise. These impaired functions have a strong cortical involvement, are disproportionate to the changes in cochlear auditory thresholds, and cause significant reductions in quality of life.

Dr. Hasenstaub’s overall goal is to understand the roles of specific inhibitory circuit elements in the auditory cortex, and how each type’s unique anatomy, connectivity, physiology, and gene expression permit them to fulfill their roles in normal and hearing impaired conditions. This basic research program by Dr. Hasenstaub into the functions and plasticity of cortical inhibitory subnetworks will lay the groundwork for designing clinically useful treatments to restore auditory processing capabilities lost due to aging, various types of hearing loss, and deafness.

P. Daniel Knott, MD

Dr. Daniel Knott was born and raised in San Diego, and returned to California in 2006 for his fellowship in facial plastic and reconstructive surgery at UCLA, where he was exposed to the full spectrum of facial anesthetic operations and treatments as well as all aspects of reconstruction of traumatic, malignant, and congenital defects of the head and neck. He won multiple research awards including the Ben Shuster Memorial award and the Ira Tresely Research award. He was also named the first runner up for the highest board score obtained on the facial plastic written and oral boards in 2007. Dr. Knott is returning to California after spending 10 years at the Cleveland Clinic, in Cleveland, Ohio.

Dr. Knott represents a new generation of facial plastic surgeons, with training and experience in both facial aesthetics and microvascular head and neck reconstruction. He believes that this broad surgical experience enables him to treat virtually any facial aesthetic and reconstructive challenge with the most contemporary and appropriate treatment. The ideal practice of facial plastic and reconstructive surgery incorporates an aesthetic eye for major microvascular reconstructive operations, and necessitates fine anatomic understanding for discrete aesthetic procedures.

Clinical interests include facial paralysis, treatment of age-related changes in the head and neck, reconstruction of facial cutaneous malignancies, rhinoplasty, and free tissue transfer. He is currently helping to develop new protocols for palatal and orbito-maxillary reconstruction and the microvascular treatment of osteonecrosis of the mandible. He also has experience in minimally invasive soft tissue facial augmentation.

Dr. Knott has authored over 20 papers, and has performed extensive research on head and neck transplantation. He has partnered successfully with basic science researchers and as a result, he was granted a US patent on a novel injectable substance for soft tissue augmentation. He has authored three book chapters on facial aesthetic surgery and is currently writing a book on the aesthetic use of botox. Dr. Knott has also served on multiple national committees and is the current President-elect of the Northeast Ohio Otolaryngology – Head and Neck Surgical Society. Dr. Knott is going to be joined by his wife, Haydee, Faculty Profiles

The Department Welcomes Five New Faculty

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who will be completing the aesthetic dermatology fellowship at UCSF, and his three children Katarina (age 6), Isabel (age 4) and Philip (age 3).

**Marika D. Russell, MD**

Dr. Marika Russell completed her residency training at the University of California, San Francisco Department of Otolaryngology – Head and Neck Surgery in June 2011 and joins the Department as a general otolaryngologist, with a focus on clinical and research endeavors in rhinology and sinus surgery. She will be attending at San Francisco General Hospital, where she will also pursue her interests in facial trauma and reconstruction. Dr. Russell will be working part time at SFGH, spending the rest of her time being a new mom to daughter Maya.

Dr. Russell was born and raised outside San Francisco in Mill Valley, CA, she then left for New York as a teenager to pursue ballet studies at the School of American Ballet. After moving on from ballet, she attended undergraduate school at New York University, receiving a BA in Sociology. After completing post-baccalaureate courses at the University of California, Los Angeles, Dr. Russell attended Medical School at Columbia University College of Physicians and Surgeons. She finally returned home to California to pursue her residency training in the Department of Otolaryngology – Head and Neck Surgery at UCSF, and is now looking forward to continuing her career here at UCSF.

**Matthew S. Russell, MD**

Dr. Matthew Russell completed his residency training at the University of California, San Francisco Department of Otolaryngology – Head and Neck Surgery in June 2011 and joins the department in the role of Otolaryngologist at the Parnassus Heights campus. His clinical interests focus on the care and management of patients with Otolaryngic issues in the acute care setting. This role will define a new practice paradigm for the Otolaryngology hospitalist. He seeks to both provide excellent patient care in an interdisciplinary setting and examine Quality Improvement issues within our specialty.

Dr. Russell was born in Delaware but spent much of his formative childhood in the Middle East. He returned to the United States during the first Gulf War, and attended the University of Delaware where he received Bachelors degrees in Biology and Anthropology. After a two-year stint doing molecular virology at the Harvard School of Public Health, he attended medical school at Boston University. Impressed by the anatomic elegance of the head and neck, his career turned to the more practical, and he decided to pursue Otolaryngology – Head and Neck Surgery as his clinical focus. While a resident at the University of California San Francisco, Dr. Russell found that he was fascinated by many aspects of Otolaryngology and particularly enjoyed the pace and clinical issues found in the acute care and hospital setting. In addition to his clinical practice, Dr. Russell is actively involved in Quality Improvement in the Department of Otolaryngology – Head and Neck Surgery residency program and the UCSF School of Medicine.

**William R. Ryan, MD**

Dr. William R. Ryan, a fellowship-trained head and neck surgeon, joined the Department in September 2011 as an Assistant Professor. Dr. Ryan sees patients and performs surgery at the UCSF Mount Zion and Parnassus campuses, and at the San Francisco Veterans Administration Hospital. His clinical interests focus on the care and management of patients with benign and malignant tumors of the head and neck. He has experience in endoscopic, minimally invasive, and traditional surgical approaches for the treatment of neoplasia of nasal cavity, sinuses, skullbase, oral cavity, oropharynx, hypopharynx, larynx, esophagus, parapharyngeal region, salivary glands, head and neck skin, soft tissues of the neck, and thyroid and parathyroid. He has experience with sentinel lymph node biopsy and regional facial reconstruction. He performs his own ultrasonography and ultrasound-guided fine needle aspiration biopsies for his patients. He is also in the process of developing the Robotic Head and Neck Surgery program at UCSF along with Dr. Steven Wang.

Dr. Ryan was born in San Antonio, Texas. He grew up in Seattle, WA. He attended college at Wesleyan University in Middletown, CT, where he received a Bachelors of Arts with a major in American Studies with minors in Architecture and Drama with Phi Beta Kappa distinction. He decided late in college to pursue medicine beginning his prerequisite courses his senior year. He attended a post-Baccalaureate program at the University of Pennsylvania to complete his premedical requirements. He moved to the Bay Area to attend medical school at Stanford University. He continued on at Stanford for his Otolaryngology – Head and Neck Surgery internship and residency.

Last year, Dr. Ryan completed the Bryan Hemming Advanced Head and Neck Oncology Fellowship at the UCSF Helen Diller Comprehensive Cancer Center.

In addition to his clinical practice, Dr. Ryan is actively involved in teaching in the Department of Otolaryngology – Head and Neck Surgery residency program and the UCSF School of Medicine.
2011 Francis A. Sooy Lecture

On June 18, the faculty, residents, alumni and friends of the Department of Otolaryngology – Head and Neck Surgery gathered for the 2011 Francis A. Sooy Lecture, featuring guest speaker Dr. Jonas T. Johnson, Chair of Otolaryngology at the University of Pittsburgh School of Medicine. His lecture provided us great insight into his own research and clinical care for perioperative antibiotic prophylaxis for otolaryngology patients as well as the importance of surgery in the era of chemoradiation therapy. The Department’s annual end-of-year dinner was held later that evening. During the dinner, the Department honored graduating Chief Residents Eli Groppo, Marika Russell and Matthew Russell together with Clinical Fellows Julina Ongkasuwan and William Ryan. Other highlights included the presentation of special awards. This year’s Roger Boles, MD, Award for Excellence in Clinical Faculty Teaching was conferred to Andrew H. Murr, MD, and the Francis A. Sooy, MD, Award for Clinical Excellence was awarded to David W. Eisele, MD. Dr. Eli Groppo received the Kelvin Lee Resident Award for outstanding and meritorious service and team leadership.

Annual Resident Research Symposium

The 9th Annual Resident Research Symposium was held on June 17. The presentations of the residents’ year-long research efforts highlight the Department’s diversity of scientific investigation to an audience that includes otolaryngologist–head and neck surgeons and researchers from UCSF and throughout the region.

A wide range of intense research projects were presented this year in succession to a history of progressively complex research presented by our residents. It certainly was difficult to decide, but during this annual event, only three residents are recognized and awarded for the quality of their research and presentation. We wish to send another huge round of congratulations to all residents who participated this year and additional applause to Kevin C. Huoh, MD, for his first place presentation on “Socioeconomic Determinants in Pediatric Sleep Disordered Breathing.” Second place went to Jolie L. Chang, MD, for her presentation “Auditory Assessment in a Mouse Model of Fibrous Dysplasia.” Megan L. Durr, MD, was award third place for her presentation “Novel Post-Operative Sino-Nasal Endoscopy Scoring System.”

From left: Sooy Lecturer Jonas Johnson with his wife, Janis, and Department Chair David Eisele; William Ryan, Matt Russell, Marika Russell, Eli Groppo and Julina Ongkasuwan

Symposium award winners, from left: Kevin Huoh, Jolie Chang and Megan Durr

Justin Marsh Joins Department as Director of Development

Justin Marsh joined the OHNS team in September to serve as the department’s Director of Development. Justin has three years of previous UCSF experience in supporting the Department of Orthopaedic Surgery as Development Director and also served UCSF as Assistant Director of Alumni Gift Planning. Before moving to San Francisco in 2007, Justin worked in New York for the U.S. Fund for UNICEF for seven years in roles of increasing responsibility supporting UNICEF’s fundraising efforts.

Justin’s new role with the Department is truly exciting for him as it directly relates to his field of study and “other career.” Justin holds a Master of Music Degree in Voice from the Cleveland Institute of Music and actively performs in opera, musical theater and cabaret shows around the Bay Area. This Fall/Winter, Justin can be seen and heard at Opera San Jose in their productions of Idomeneo, I Pagliacci, and La Traviata.

Upcoming Events

18th Annual Advances in Diagnosis and Treatment of Sleep Apnea and Snoring
February 17-18, 2012
San Francisco, California

Pacific Rim Otolaryngology Head and Neck Surgery Update Conference
February 18-21, 2012
Honolulu, Hawaii

For more information about these and other continuing education offerings, please visit http://ohns.ucsf.edu and http://cme.ucsf.edu.