Otolaryngic Allergy:
Past, Present and Future
ON THE COVER:
Ragweed pollen (Ambrosia psilostachya).
(C) Dennis Kunkel, Microscopy/Visuals Unlimited, Inc.

National Leaders in Allergy and Sinus:
Front row (left to right): Nick Debnath, MD, Anne E. Getz, MD
Middle row: M. Allison Ogden, MD, Ravindra Uppaluri, MD, PhD,
Maggie A. Kramper, RN, FNP
Back row: Stanley E. Thawley, MD, Jay F. Piccirillo, MD

To learn more about the Washington University Sinus Institute
visit: wusi.wustl.edu
Sinus Institute responds to the otorhinolaryngic needs of the Midwest

Allergic disease and sinusitis are among the most common medical conditions in the United States. An increase in individuals who suffer from allergic rhinitis is on the rise, with recent estimates indicating that as much as 10 to 20 percent of the population in western societies is affected. This number roughly translates to 30-60 million in the United States annually.  

IgE-mediated sensitivity to inhalant allergens is identifiable in 60% of patients with chronic rhinosinusitis. These two conditions account for significant morbidity and decrease in quality of life, direct medical costs, as well as indirect loss of productivity, absence from work or school, and poor performance when present. With the close pathophysiological relationship of rhinitis and sinusitis, the trend of diagnostic description is to blend them into one shared name, rhinosinusitis. With inflammation as the common pathology of the allergic process, multiple areas of the unified airway—upper and lower—may be affected. Allergic manifestations within the nose are commonly understood. Chronic laryngitis, Meniere's disease, asthma and sleep disorders are now being recognized as having an allergic component in some patients.

The large number of patients with allergic upper respiratory disease coupled with patients’ demand for comprehensive care has resulted in an increased need for allergy education and training. In the past, much otolaryngic training was obtained through courses offered through the American Academy of Otolaryngic Allergy (AAOA), with board certification established by successful completion of formal courses and testing.

In a study published in 1985 by John D. Osguthorpe, MD, 58% of residency programs offered no formal training in allergy. The Otolaryngology Residency Review Committee responded by defining the program requirements for allergy training within residency programs, and allergy training has been increased in otolaryngology residencies as a result of these requirements. A study in 2006 revealed that 62% of otolaryngology residency programs have active allergy programs with the majority of the remainder in the process of adding allergy to their formal training. A standard scope of knowledge for allergy/immunology as it relates to the practice of otolaryngology has been developed based on an evidence-based core of information.

The Department of Otolaryngology at Washington University School of Medicine responded to this need by forming the Division of Sinus/Allergy in 1987. The division provides didactic education on allergic disease principles, basic science mechanisms, diagnosis, treatment, research and its practical application in a clinical setting. Care is provided at two St. Louis locations and one rural location. The allergy area has evolved into an integral component of the Washington University Sinus Institute, which provides comprehensive medical and surgical management of rhinosinusitis.


—Stanley E. Thawley, MD (residency graduate ’75), Associate Professor, Otolaryngology
A Critical Review

Bringing Skull Base Anatomy Within Reach

Although published reports of diagnostic nasal endoscopy exist from the early 1900’s, it was not until a mere half-century ago that therapeutic sinonasal endoscopy was born. Austrian otolaryngologist Walter Messerklinger, MD, catapulted the field of rhinology forward with his studies on the normal and pathological functions of the upper airway, and utilization of sinonasal endoscopy as not merely a diagnostic, but therapeutic tool. Together with Harold Hopkins’ advancements in endoscopic optics in the 1950’s and Karl Storz’s telescopic engineering, the foundation was laid for the evolution of minimally-invasive access to maximally out-of-reach anatomy.

In addition to advances in instrumentation, the field has made huge strides with the aid of technologic innovations, such as high-definition cameras, image-guidance navigation, high-resolution radiologic studies, and intra-operative CT and MRI imaging. These tools have facilitated a trend toward diagnosis of smaller lesions and earlier operative intervention.

Endoscopic approaches are largely replacing traditional complex transcranial or transfacial operations to access out-of-reach sinuses, skull base, pterygopalatine and infra-temporal fossae. Diagnoses once requiring craniotomy, such as cerebrospinal fluid (CSF) leaks and meningoencephalocele repairs of the anterior and central cranial base, are now routinely repaired with a transnasal endoscopic approach. Technical advances in the repair of skull base defects with fat plugs, composite under- and overlay free grafts, and pedicled intranasal flaps have granted surgeons the freedom to create such defects during therapeutic resection, thereby expanding the indications for endoscopic approaches.

The proximity of skull base tumors to critical structures such as the brain, internal carotid arteries and optic chiasm has long presented therapeutic challenges for what would traditionally be considered oncologically sound en bloc resection. Endoscopic resection of benign and malignant sinonasal and skull base neoplasms, however, has been shown to be both practical and safe. A meta-analysis of over 1,700 patients with resection of sinonasal inverting papilloma demonstrated an improved local recurrence rate (12%) in patients undergoing endoscopic resection, while local recurrence remained stable and slightly higher (20% in traditional and contemporary cohorts undergoing an external approach).1 Reports on several studies comparing endoscopic versus open resection of 158 patients with various sinonasal and skull base malignancies showed no significant difference in local recurrence or disease-free survival between the approaches.2 Endoscopic resection has also been shown to decrease morbidity by avoiding retraction of the brain, preserving uninvolved structures, and reducing hospital stay. This approach also provides the benefit of superb visualization and magnification while improving post-operative cosmesis.

A final advantage of the minimally-invasive approach is the potential for increased expertise in each case by virtue of the interdisciplinary collaboration of otorhinolaryngologists, neurosurgeons, ophthalmologists, and neuroradiologists, thus potentiating the level of care being delivered to our patients and increasing the probability of treatment success. As we travel forward in this new frontier, we are assured exciting and promising times as endoscopic sinus and skull base surgeons.


—Anne E. Getz, MD
Assistant Professor, Otolaryngology

Welcome: New Faculty

Archie B. Harmon, PhD, CCC-SLP, recently joined the faculty as an instructor of otolaryngology. Harmon completed a clinical fellowship in voice and swallowing disorders in the Department of Otolaryngology at the Emory Voice Center in Atlanta, Ga. in 2009. He then received his doctorate from Florida State University, Tallahassee, Fla. in July 2010. He is a clinical speech-language pathologist at the Center for Advanced Medicine in the Voice and Swallowing Institute.

Jonathan L. McJunkin, MD, (residency graduate ’10) will be joining the faculty in July 2011 as an assistant professor of otolaryngology. He will return to St. Louis after completing an intense one-year neuro-otology fellowship at the Ear Institute of Chicago. McJunkin will join the Ear Institute at Washington University. He will see patients at the Center for Advanced Medicine and the West County Office location.
Alumni focuses practice to improve quality of life for rhinologic patients.

I have been an allergy patient with nasal polyps since childhood, and although coming back “home” to the Midwest and Washington University School of Medicine has wreaked havoc on my sinuses, it is certainly a great place to begin an active clinical practice as a rhinologist.

With over 31 million Americans afflicted with chronic sinusitis, there is no shortage of patients in need of our help in this region known for its allergy and asthma sufferers. After my fellowship in rhinology and endoscopic skull-base surgery at the Medical University of South Carolina with Rodney Schlosser, MD, I returned to St. Louis to pursue my clinical interests in revision frontal sinus surgery and endoscopic approaches to sinonasal tumors.

Interesting cases are not hard to come by in a tertiary referral center. In just over one year, I have already built up a case series of extended endoscopic approaches to frontal fibro-osseous lesions, unusual mucoceles, inverted papilloma, cerebrospinal fluid leak repair, and even a large sinus neurofibroma. Also, during this first year, six other faculty members and I established the Washington University Sinus Institute (WUSI) with the mission of providing advanced comprehensive treatment of nasal and sinus disease.

WUSI is the first group practice in Missouri to focus solely on rhinology and sinus surgery. The early success of the Institute is attributed to the same reasons Washington University remains a unique scholarly environment: multidisciplinary collaboration and excellent resources. For example, WUSI surgeons have built a minimally-invasive endoscopic skull base program with neurosurgery to treat extensive skull base neoplasms in one of the few OR suites in the country outfitted with intraoperative MRI.

My research interests have focused on clinical issues such as outcomes of endoscopic sinus surgery, efficacy and delivery of certain topical medications in the treatment of chronic rhinosinusitis, and quality of life studies in sinonasal and allergic disease. One of my long-term goals is to pursue longitudinal studies in the chronic sinusitis population to determine whether outcomes are better with endoscopic sinus surgery than with medical management alone. Few large-scale longitudinal studies exist in the field of rhinology, and in this era of evidence-based delivery of care, greater levels of evidence are required to educate patients and doctors alike about the appropriateness of medical and surgical management of sinus disease.

Washington University was a great place to train as a resident because of the rich history, collegiality, and clinical expertise of the Department of Otolaryngology. For the same reasons it is a perfect place to begin my career as an academic rhinologist.

—Nick Debnath, MD, (residency graduate ‘08)
Assistant Professor, Otolaryngology

Upcoming Events

Keiko Hirose, MD, will present a poster entitled “Otoxicity: Mechanisms and Protection” and Kevin K. Ohlemiller, PhD, will deliver a lecture on cochlear pathology in presbycusis at the Hearing in Aging Symposium, at the Association of Research in Otolaryngology (ARO) Mid-Winter meeting on February 19-23, 2011 in Baltimore, MD.

Bruce H. Haughey, MBChB, will present the annual Morrison Lecture in the Department of Otolaryngology at the University of California-San Francisco on March 31, 2011. Haughey will serve as guest speaker at the University of North Carolina-Chapel Hill on May 24 & 25, 2011. He also has been invited to speak at the 1st Congress of the Confederation of European ORL-HNS on July 2-6, 2011 in Barcelona, Spain.

Michael Valente, PhD, will present the following lectures: “Evidence based practice and hearing aid fittings.” (Ohio Academy of Audiology in Columbus, Ohio in February 2011 and Alabama Speech Language Hearing Association in Birmingham, Ala. in March 2011); “Fitting options for patients with unilateral hearing loss,” and “Verifying hearing aid performance using coupler and real ear methods” (Canadian Academy of Audiology, Moncton, Canada, April 2011).

Jay F. Piccirillo, MD, will travel to Frankfurt, Germany to serve as a consultant to Merz Pharmaceuticals at the ENT workshop in January 2011. He will participate in discussions concerning unmet medical and drug development needs. He will also speak at the State of Missouri Otolaryngology Meeting in Kansas City, MO on April 9, 2011 on Hereditary Hemorrhagic Telangiectasia (HHT).

The 30th Annual Ogura Lectureship and the 25th Annual Resident Research Day will be held June 10, 2011, at the Eric P. Newman Education Center. The resident and fellow graduation and alumni celebration will follow in the evening at the Renaissance Grand Hotel. Check your mailboxes in March for more information on these events!
Next Steps for 2011 Graduates

Residents

Ryan F. Brown, MD

Next steps: A one-year fellowship in facial plastic and reconstructive surgery, with Yadro Ducic, MD, in Dallas/Fort Worth, Texas. Special interest is in cleft lip and cleft palate surgery; plan to go on international mission trips each year.

Highlights of residency: The multiplicity of knowledge he has gained and now has to share with his patients, teaching junior residents and working with awesome attendings.

Christina B. Magill, MD

Next steps: A one-year fellowship in facial plastic and reconstructive surgery at the University of California at Davis with Jonathan Sykes, MD.

Highlights of residency: The mentorship of the attendings, a great group of co-residents and spending time exploring St. Louis with her wonderful husband.

Simon Milov, MD

Next steps: Private practice with Rio Grande Ear, Nose & Throat in Harlingen Texas, working with Tan Nguyen, MD, (residency graduate ’99)

Highlights of residency: The chance to work with world class physicians who are teaching not only how to treat the disease but how to truly care, and using high-end cutting edge technology.

Jason T. Rich, MD

administrative chief resident

Next steps: A one-year fellowship in head and neck surgery and microvascular reconstruction at the University of Toronto in Ontario, Canada.

Highlights of residency: The opportunity to work with the wonderful staff and residents.

Fellows

Pediatric Otolaryngology

Next steps: Considering academic positions in St. Louis, Mo.

Highlights of residency: The tertiary care of otolaryngology, excellent faculty and the outstanding facilities at St. Louis Children’s Hospital.

Transoral Laser Microsurgery; Microvascular Head & Neck Reconstruction; Head and Neck Oncology

Next steps: Actively interviewing for a head and neck position.

Highlight of fellowship: The transoral microsurgical experience with Bruce Haughey, MBChB, and the exposure to in-office ultrasound and microvascular experience with Brian Nussenbaum, MD, and Jason Diaz, MD.

Facial Plastic and Reconstructive Surgery

Next steps: Private practice in Beverly Hills, Calif., focusing on facial plastic and reconstructive surgery.

Highlight of fellowship: The rhinoplasty and aging face surgical experience received under the mentorship of Gregory Branham, MD, and the chance to teach first-class residents.

Arash Morazadeh, MD

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Washington University Otolaryngology Alumni
Special Events

Washington University Sinus Institute physicians participated in St. Louis University’s Practical Anatomy and Surgical Education Course, “Midwest Resident Update in Rhinology: Techniques in Endoscopic Sinus Surgery” November 12-13, 2010 at the Practical Anatomy and Surgical Education Center, St. Louis, Mo. Anne E. Getz, MD, and Nick Debnath, MD, worked as co-directors with Jastin Antisdel, MD, from St. Louis University to design a workshop that gave residents from the Midwest intensive hands-on training in basic and advanced image-guided endoscopic sinonasal techniques. The faculty for the course were from St. Louis University School of Medicine, Washington University School of Medicine, the University of Iowa School of Medicine and private practices in the St. Louis area.

Jill B. Firszt, PhD, Richard A. Chole, MD, PhD, and the Department of Otolaryngology at Washington University School of Medicine in St. Louis hosted the Objective Measures in Auditory Implants – 6th International Symposium on September 22-25, 2010. Over twenty speakers from Belgium, Canada, England, Germany, Israel, Netherlands and the United States, participated in the event. Two hundred attendees listened to auditory experts discuss topics, including deafness and the use of electrical stimulation on the central auditory system, imaging studies related to deafness, and the effect of location on the performance of implanted electrodes.

Lawrence R. Lustig, MD, Francis A. Sooy, MD, Endowed Chair of Otolaryngology at the University of California-San Francisco, Calif. delivered the Senturia Lecture to an enthusiastic group at Washington University School of Medicine on October 28, 2010.

Selected Publications


For a complete listing of publications in the Department of Otolaryngology at Washington University, please visit ent.wustl.edu
The Department of Otolaryngology has had a banner year. Three of our faculty members received prestigious awards. The Triological Society named Timothy E. Hullar, MD, as recipient of the 2011 George L. Adams Young Faculty Award, which was established to recognize the contributions of a young academic head and neck surgeon who is in the early stages of career development. William W. Clark, PhD, was honored with the Distinguished Educator (Graduate Student Teaching) Award by the Class of 2011 from Washington University School of Medicine. Joel A. Goebel, MD, (residency graduate ‘85) was recently named a member of the Fellowship of the Royal College of Surgeons.

With successes such as these, however, come some challenges and opportunities for growth. We are bursting at the seams at our medical campus location and expanding in our West County location. Plans are underway to relocate our active West County offices to the campus of Barnes-Jewish West County Hospital, where we are doing an ever-increasing volume of outpatient procedures.

Our clinical and research faculty members have continued to distinguish themselves in medical research and education, and we are proud of our legacy of training many future academic leaders.