Department of Otolaryngology

The Department of Otolaryngology-Head & Neck Surgery (http://oto.wustl.edu) at Washington University in St. Louis has a rich, 130-year history of leadership in our field that is built on the foundations of academic medicine: patient care, research, training and service. Our past leaders include luminaries in the field of otolaryngology such as John Blasdel Shapleigh, MD, Greenfield Sluder, MD, Lee Wallace Dean, MD, Theodore Walsh, MD, Joseph Ogura, MD, John Fredrickson, MD, Richard A. Chole, MD, PhD, and most recently Craig A. Buchman, MD, FACS. Even from our earliest days, prior to the inception of the McMillan Eye, Ear, Nose and Throat Hospital (circa 1943), excellence has been an integral part of the department's fabric. A look at former faculty and program graduates reveals many of the true innovators in our field. While we remain humbled by our beginnings and past achievements, we choose not to rest on our laurels. Rather, we aspire to further our commitment to improving patients' lives by leading our field and its clinical application.

Today more than ever, we are driven to provide the highest quality, cutting-edge patient care that is both safe and effective. Our Washington University physicians and team, together with our Honor Roll Award-winning hospital, Barnes-Jewish Hospital (U.S. News, 2016-17), are second to none in tackling the full spectrum of conditions involving the ear, nose, throat, head and neck. Our basic, translational and clinical research programs are remarkable, providing answers to a variety of relevant questions that build on our foundations of knowledge, lay the groundwork for future clinical trials, and provide cutting-edge patient solutions. Our educational programs for medical and graduate students, physicians in training, and established practitioners are committed to creating a culture of lifelong learning that firmly establishes our next generation of leaders in the field. Our residency program is highly rated by all metrics, providing balanced training across the clinical subspecialties and unique opportunities for growth and development as clinician scientists (T32 training grant) and educators. We are most proud that these activities are ongoing in a work culture that values collegiality, inclusiveness, diversity and mutual respect. The Department of Otolaryngology-Head & Neck Surgery at Washington University in St. Louis is a really outstanding place!

CID at Washington University School of Medicine

The consortium of graduate education, research and clinical programs known today as CID at Washington University School of Medicine was born out of the pioneering efforts of St. Louis physician Max Goldstein, MD. In 1914, he founded the Central Institute for the Deaf (CID), where doctors and teachers worked together to help deaf people. When CID's school building opened two years later, its auditory/oral methods for instructing deaf children were groundbreaking.

Washington University and CID first joined forces in 1931, when CID's established teacher training program became the first deaf education undergraduate program to affiliate with a university. Graduate programs in deaf education, audiology, and speech and hearing sciences soon followed.

CID's research efforts began in the 1930s to study the anatomy and science of hearing. During World War II, CID's research on hearing loss in military personnel laid the foundation for the field of audiology. CID also pioneered hearing testing and hearing aids and opened the country's first hearing aid clinic in 1941. In September 2003, a new affiliation transferred CID's graduate degree programs, research programs and adult audiology clinic, along with its building, to Washington University School of Medicine. The CID school continues to operate on the School of Medicine campus as CID — Central Institute for the Deaf.

Today, these programs continue to work together to fulfill a shared mission to serve people with hearing loss.

Website: http://oto.wustl.edu

Degrees & Requirements

While the Department of Otolaryngology does not offer its own degree, some of the department's courses are open to students in the MD and MSTP (MD/PhD) programs. Further information about the MD and MSTP degrees can be found in the Degrees & Programs Offered (http://bulletin.wustl.edu/medicine/degrees) section of this Bulletin.

Otolaryngology Course Requirements

Otolaryngology is presented to students in the first-, second-, third- and fourth-year classes. Physical diagnosis skills are taught in the first year. Clinically oriented lectures and a physical diagnosis workshop are presented to second-year students. In the third year of the medical curriculum, four-week elective rotations on one of the services at Barnes-Jewish Hospital or St. Louis Children's Hospital are offered. During this period, there is teaching at the bedside, in the operating room and in the clinic, supplemented by daily afternoon lectures, Grand Rounds on Wednesdays, and an introduction to audiology.

Fourth-year students interested in ENT as a specialty may take a two- to four-week elective designed to give them exposure to patient care, both in the outpatient clinic and the operating room and postoperative setting. An additional four-week elective that provides comprehensive ambulatory experience is offered to students headed for primary care.
Research

M55 Oto 900

The type of research will depend upon the current phase of the research program in each laboratory. Students should contact the director of each laboratory to negotiate.

Pablo M Blazquez, PhD
East McDonnell Science Building
4566 Scott Avenue
Phone: 314-362-1013
Role of the vestibulo-cerebellum and its target nuclei in eye movement control and spatial orientation. We used a range of methodologies: single and multiunit recordings, electrical brain stimulation, computational methods, pharmacology and behavioral studies. Our main lines of research are:
1) Signal transformations carried out by the the vestibulo-cerebellum during visual and vestibular stimulation. 2) Neuronal computations performed by the anterior and posterior cerebellar vermis for spatial navigation in mice. 3) Role of the cerebellum-brainstem loop in motor learning in the vestibulo-ocular reflex.

Students will be instructed in one or several techniques and are expected to contribute significantly to the development of specific lab projects.

Joel A. Goebel, MD, FACS
McMillan, 9th Floor
Phone: 314-362-7344
Clinical research testing of posture and ocular motor control. Projects include measurement of gaze stabilization during head movement, otolith input into dynamic subjective visual vertical measurements, computerized historical data screening for dizziness, and head-mounted vibrotactile balance prosthesis (BalCap). We welcome students to join these projects at any stage.

Judith E.C. Lieu, MD, MSPH
3S35 Children's Hospital; and McMillan, 9th Floor
Phone: 314-747-8205
Clinical Outcomes Research in Pediatric Otolaryngology. The Clinical Outcomes Research office performs clinical epidemiology and health services research. (Please reference the research elective offered by Dr. Jay Piccirillo in Otolaryngology for more details.) These techniques and methodologies are used to investigate clinical problems seen in pediatric otolaryngology. Projects currently underway include the evaluation of quality of life of young children with hearing loss, evaluation of hearing loss on perception of fatigue in children, use of MRI to investigate effects of hearing loss in children, and characterization of hearing loss in Wolfram syndrome. Potential studies include investigating the phenotypic variation of ear disease in children with immotile cilia syndrome, and evaluating change in quality of life of children who begin using hearing amplification devices. Other projects of the student's choosing that would utilize these research techniques may also be pursued.

Kevin K. Ohlemiller, PhD
2205 Central Institute for the Deaf
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Gene/environment interactions in cochlear injury. We study the interaction of genes and environment that increase cochlear injury due to noise and ototoxic exposure, with an emphasis on how these may yield apparent presbycusis. Because cochlear function and injury is the same in mice and humans, and governed by the same genes, we use mostly mouse models. Methods employed include standard ABR assessment and intra-cochlear recording, quantitative light microscopy, immunohistochemistry, and western blots. We also collaborate to map and perform expression profiling of genes that underlie traits we have discovered. We and our collaborators have identified specific genes and inbred strains of mice that mimic the three major forms of human presbycusis (sensory, neural and striatal). Sensory presbycusis appears promoted by alleles and mutations that impair protective factors such as antioxidant enzymes, or that impair ion homeostasis. Neural presbycusis can be modeled by mutations that alter the function of cholinergic receptors. While we are not sure what types of genes and mutations can lead to strial presbycusis, we have discovered four mouse strains that show the key feature of this disease (age-related endocochlear potential reduction), and also show distinct types of strial pathology.

We have shown that some of the same gene alleles and mutations that promote presbycusis also promote cochlear noise injury. Such findings point to an interpretation of sensory presbycusis as principally cumulative injury. We have also published evidence for one or more QTLs that impact the qualitative character of noise injury. Important implications of our findings are (1) that there exists no single "mammalian" archetype of cochlear noise injury, and (2) that injury to the organ of Corti and lateral wall are mechanistically and genetically independent.

Our research is eminently adaptable in difficulty and scale to students' schedules and other requirements. Students may expect to learn the full range of methods we employ, including physiology, immunohistochemistry, histopathology, and cellular/molecular techniques.

Jay F. Piccirillo, MD
McMillan, 9th Floor
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The Clinical Outcomes Research Office of the Division of Research performs basic and applied clinical epidemiology and health services research. Clinical epidemiology is the study of the diagnosis, prognosis, and evaluation of treatment. Health service research is the study of the delivery of health care. The scientific methodology of clinical epidemiology is based on the architecture of clinical research, biostatistics and data processing. Current projects include studying the impact of
comorbidities on treatment and outcome for patients with cancer. We also conduct research into the neurobiology, treatment and outcomes for patients with tinnitus. We also use smartphone technology to capture ecological momentary assessment of tinnitus. Additional projects include exploiting neuroplasticity as part of olfactory training for patients with anosmia. Using clinical epidemiology methodology, we can also study a variety of other diseases.

**Faculty**

**Department Head**
Craig A. Buchman, MD, FACS

Visit our website for more information about our faculty (http://oto.wustl.edu/About-Us/Faculty-Physicians) and their appointments.

A

Azadeh Afshari, DDENT, MS
Instructor in Clinical Otolaryngology (primary appointment)
DDENT Univ of Texas Med Sch Houston 2014
BS West Virginia University 2004
MS Univ of Texas Med Sch Houston 2013

Nawal Mona Ahmed
Instructor in Clinical Otolaryngology (DDS) (primary appointment)

B

Sean B Bailey, MD, MS
Instructor in Clinical Otolaryngology (primary appointment)
MD Tulane University 1987
BS Tulane University 1981
MS Tulane University 1988

Jianxin Bao, PHD
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PHD University of Florida 1992

Perry J Bartels, DDENT
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DDENT Marquette University 1991

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Instructor in Audiology and Communication Sciences
BS University of Illinois 1981
MS Washington Univ in St. Louis 1983

Pablo M Blazquez Gamez, PHD
Associate Professor of Otolaryngology (primary appointment)
PHD University of Seville 1998

Joseph P Bradley, MD
Assistant Professor of Otolaryngology (primary appointment)

BS Washington Univ in St. Louis 2003
MD University of Kansas Medical 2008

Gregory Harris Branham, MD
Professor of Otolaryngology (primary appointment)
BS University of South Carolina 1979
MD University of South Carolina 1983

Craig Alan Buchman, MD
Lindburg Professor of Otolaryngology (primary appointment)
MD University of Florida 1990
BA University of Georgia 1986

C

Chad Phadung Chadaratana, MD, UNKNOWN
Instructor in Clinical Otolaryngology (primary appointment)
MD School Not Listed 1964

John Jeonhwan Chi, MS, MD
Assistant Professor of Otolaryngology (primary appointment)
MS City College 2003
MD SUNY DOWNSTATE MED BROOKLYN 2007
BS Columbia University 2001

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Professor of Audiology and Communication Sciences
Professor of Developmental Biology
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MD University of Southern Calif 1969

William W. Clark, MS, PHD1, PHD
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Professor of Audiology and Communication Sciences
Professor of Education
MS University of Michigan 1973
PHD1 University of Michigan 1975
PHD University of Michigan 1975
BA University of Michigan 1969

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Instructor in Clinical Otolaryngology (DDS) (primary appointment)
DDENT University of Missouri 1975
BS University of Missouri 1971

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PHD Washington Univ in St. Louis 2003
MS Washington Univ in St. Louis 1987

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BS Yale University 1998
MD University of Michigan 2002

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MD University of Illinois 1970
BA Washington Univ in St. Louis 1967

Katherine Dunsky, MD
Assistant Professor of Otolaryngology (primary appointment)
MD Saint Louis University 2010

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BA Northwestern University 1979
MD Univ of Wisconsin Madison 1983

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MS University of California 1989
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BS University of California 1982

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BS University of Notre Dame 1977
MD Saint Louis University 1981

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MD Cornell University 1987
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MD University of Virginia 1993
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Director of Deaf Education Studies in Audiology and Communication Sciences
BA Emory University 1995
M ED Smith College 2005
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PHD State Univ of NY Buffalo 1989

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MS Washington Univ in St. Louis 1975
BS Purdue University 1973

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MD Northwestern University 1992
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Assistant Professor of Otolaryngology (primary appointment)
William Hartel  
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MD University of MO Kansas City 1980  
BA University of Missouri 1980

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Professor of Otolaryngology (primary appointment)  
Professor of Audiology and Communication Sciences  
Professor of Pediatrics  
Vice Chairman for Pediatrics Dept of Otolaryngology  
MD Harvard University 1993

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MA1 University of Missouri 1999  
PHD University of Iowa 1967  
BS Kansas State University 1962  
MA University of Iowa 1965

Timothy Everett Hullar, MD  
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MD Harvard University 1996  
BS Stanford University 1990

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MD Saint Louis University 2009  
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DDENT Washington Univ in St. Louis 1976  
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Instructor in Clinical Otolaryngology (DDS) (primary appointment)

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Instructor in Otolaryngology (primary appointment)  
PHARM Delhi University 2007  
BAS Delhi University 2005  
PHD Southern Illinois University 2012

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BS University of Oklahoma 2007  
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DMDENT Washington Univ in St. Louis 1985

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BA Dartmouth College 1995  
MBCHB National University of Ireland 2000  
MHA Harvard University 2012

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Assistant Professor of Audiology and Communication Sciences  
MSSH University of Kansas Medical 2002  
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Vice Chairman Education Department of Otolaryngology  
BS University of CA Davis 1988  
MD Washington Univ in St. Louis 1992

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BS Muhlenberg College 1981  
MD University of Maryland 1985

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BA Duke University 1989

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MD Washington Univ in St. Louis 2002

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Interim Director of Audiology Studies in Audiology and Communication Sciences
PHD University of Pittsburgh 2012
BS Missouri Baptist College 2001
MS Washington Univ in St. Louis 2003

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BS Maryville University 1959
PHD Columbia University 1975
MA Saint Louis University 1961

Jonathan Erik Peelle, MS PSYC, BAS, PHD
Associate Professor of Otolaryngology (primary appointment)
Associate Professor of Psychological & Brain Sciences
MS PSYC Brandeis University 2002
BAS Houghton College 1999
PHD Brandeis University 2005

Supote Phipatanakul, MD
Assistant Professor of Clinical Otolaryngology (primary appointment)
MD Chulalongkorn University 1965

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Professor of Medicine
Professor of Occupational Therapy
Vice Chairman for Research, Dept of Otolaryngology
BA University of Vermont 1979
MD University of Vermont 1985

Patrik Pipkorn, MD
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MD University of Gothenburg 2007

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Lisa Gayle Potts, PHD, MS
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Assistant Professor of Audiology and Communication Sciences
PHD Washington Univ in St. Louis 2006
MS Washington Univ in St. Louis 1991
BS Southern Illinois University 1988

Jason T. Rich, MD
Assistant Professor of Otolaryngology (primary appointment)
MD Ohio State University 2004
BS Brigham Young University 2000

Mark A Rutherford, PHD
Assistant Professor of Otolaryngology (primary appointment)
BS University of MO St Louis 1999
PHD University of Oregon 2005

Alec N Salt, MS, PHD
Professor of Otolaryngology (primary appointment)
MS University of Birmingham 1974
BS University of East Anglia 1973
PHD University of Birmingham 1977

John Stone Schneider, BBA, M PP, MD
Assistant Professor of Otolaryngology (primary appointment)
BBA University of Chicago 1997
M PP University of Chicago 2007
MD University of Chicago 2007

Allen Sclaroff, DDENT
Professor of Clinical Otolaryngology (Oral Surgery) (primary appointment)
BA University of Colorado Boulder 1968
DDENT Temple University 1972

Karl Shanker, DDENT
Instructor in Clinical Otolaryngology (DDS) (primary appointment)
BA Washington Univ in St. Louis 1975
DDENT University of Missouri 1978

Lavinia Sheets, PHD
Assistant Professor of Otolaryngology (primary appointment)
Assistant Professor of Developmental Biology
PHD Oregon Health Science Univers 2007
BS Pacific University 1996

Emily A. Spataro
Assistant Professor of Otolaryngology (Pending Executive Faculty Approval) (primary appointment)
BS Duke University 2007

Isolde E Thalmann, MA, PHD
Professor Emeritus of Otolaryngology (primary appointment)
MA Washington Univ in St. Louis 1973
PHD California Western 1982
BS Washington Univ in St. Louis 1968

Ruediger Thalmann, MD
Professor Emeritus of Otolaryngology (primary appointment)
Lecturer in Otolaryngology
MD University of Vienna 1954

Rosalie May Uchanski, PHD, MS
Assistant Professor of Otolaryngology (primary appointment)
Assistant Professor of Audiology and Communication Sciences
BS University of Illinois Chicago 1978
PHD Mass Inst of Technology (MIT) 1988
MS Mass Inst of Technology (MIT) 1981

Michael Valente, PHD, MS
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Professor of Audiology and Communication Sciences
PHD University of Illinois 1975
MS Adelphi Univ 1972
BA Adelphi Univ 1970

Lora Maureen Valente, PHD, MS
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Associate Professor of Audiology and Communication Sciences
PHD Washington Univ in St. Louis 2006
BS University of Illinois 1974
MS University of Illinois 1975

Wayne A Viers, MD
Associate Professor of Clinical Otolaryngology (primary appointment)
MD University of Oklahoma 1956
BS Phillips University 1952

Mark Edward Warchol, PHD
Professor of Otolaryngology (primary appointment)
Professor of Audiology and Communication Sciences
Professor of Neuroscience
BS University of Washington 1981
PHD Northwestern University 1989

Cameron Connelly Wick, MD
Assistant Professor of Otolaryngology (primary appointment)
BS Washington & Lee 2006
Courses


M55 Oto 660B Clinical Topics In Otolaryngology
This course consists of nine introductory lectures on common diseases of the head and neck, including voice disorders, head and neck cancer, hearing loss, management of vertigo, pediatric otolaryngology, salivary gland disorders, sinusitis, otolaryngologic emergencies and facial trauma. Additionally, there is a case-based roundtable focusing on otolaryngology disorders affecting the geriatric population and the involvement of allied health care disciplines in the evaluation and management of these patients. Each lecture is highlighted by case presentations and treatment options in addition to pathophysiology. This course follows the physical examination practicum given earlier in the academic year. Credit 9 units.

M55 Oto 801 Otolaryngology
Four-week rotation includes evaluation of ENT problems presented to specialists for diagnosis and treatment. The student participates in the clinic, hospital and operating room. This also includes time on the Pediatric ENT Service, Audiology, Voice Laboratory, and Vestibular Evaluation Laboratory. Option of rotation on the ENT Service at VAMC is available.

M55 Oto 803 Pediatric Otolaryngology
The student will actively participate in the clinical office, inpatient consultations, and surgery with the attending staff at St. Louis Children's Hospital. Care would be taken to provide experience in the common problems one would see in primary care pediatrics or family practice. Participation in sub-specialty/multidisciplinary clinics such as the Cleft and Craniofacial clinic is encouraged. Opportunity will be provided to learn the fundamentals of audiological evaluation. Students participating in this elective will attend academic conferences in both the pediatric and adult divisions.

M55 Oto 820 Practicum in Adult Clinical Audiology
During this rotation, guidance will be provided in the administration and interpretation of audiometric tests, with an emphasis on defining the severity of auditory dysfunction and identifying sites of pathological processes. Theoretical bases of acoustics, anatomy and physiology, and electronics will be reviewed as they relate to auditory assessment. Modification of conventional test paradigms and hearing aid procedures will be covered according to each student's interests and needs.

M55 Oto 831 Neurotology
Students will actively participate in the physical exam, advanced testing and management of patients with balance dysfunction. Students will attend patient clinic two days a week, and test patients on ENG, rotary chair and computerized platform three days a week. Research participation is welcome with prior arrangements.

M55 Oto 833 Ambulatory Otolaryngology for the Primary Care Physician
This course offers a four-week exposure to ambulatory care of patients with diseases of the head and neck. Eight half-day sessions per week will be offered in attending clinics for general otolaryngology, head and neck cancer, otology and pediatric otolaryngology. Two half-day sessions are reserved for audiology, vestibular lab and voice lab experience. Surgical exposure is available for selected cases as identified by the student and attending physician, but the main goal of this rotation is outpatient diagnosis and management.

M55 Oto 900 Research Elective - Otolaryngology
Research opportunities may be available. If interested, please contact the Department of Otolaryngology.