A warm greeting to our esteemed friends and colleagues from the Department of Otolaryngology – Head and Neck Surgery at The Ohio State University College of Medicine and The Ohio State University Wexner Medical Center.

OTOLARYNGOLOGIST ELECTED CHIEF OF STAFF FOR OHIO STATE WEXNER MEDICAL CENTER

Dr. Minka Schofield looks forward to new leadership opportunity

Minka Schofield, MD, FAAOA, assistant professor in the Department of Otolaryngology – Head and Neck Surgery, has been appointed by her peers as the next chief of staff for The Ohio State Wexner Medical Center. Her four-year term, starting with two years as chief of staff-elect, began in July 2017.

As a general otolaryngologist, Dr. Schofield is devoted to her clinical practice, providing comprehensive otolaryngic care, with a subspecialty interest in allergy. She also invests considerable time in other initiatives that impact the quality of patient care and medical education.

Dr. Schofield currently serves as chair of the ENT Quality Improvement Committee and is a member of various medical center committees including the Leadership Council for Clinical Quality, Patient Safety and Services, the Senior Quality Council and the Clinical Quality and Patient Safety Committee. Through these committees, she plays an integral role in instituting policies and initiatives pertinent to patient care.

Within The Ohio State University College of Medicine, Dr. Schofield serves as co-chair for the Admissions Committee and sits on the Academic Review Board. Nationally, she has an active role on several committees within the American Academy of Otolaryngology – Head and Neck Surgery.

“I chose Ohio State because I wanted to play a key role in improving patient care and teaching future physicians and to positively influence medicine from an academic and leadership perspective,” says Dr. Schofield. “I knew the environment here would provide opportunities for me to get involved and make a difference.”

Dr. Schofield says serving as chief of staff will allow her to better understand the business side of health care at the medical center while supporting the interests of her fellow physicians.

“I’ll be sitting at the table with leadership of the highest level, gaining greater insight and new perspectives,” adds Dr. Schofield. “And I’ll have the honor of serving as the voice of my colleagues, representing their diverse interests in matters that affect this work that we’re all so passionate about.”

“Dr. Schofield is a devoted colleague, friend and mentor. I have no doubt she will excel in her new role,” said Dr. Ted Teknos, chair of the Department of Otolaryngology – Head and Neck Surgery at The Ohio State University Wexner Medical Center.

“I chose Ohio State because I wanted to play a key role in improving patient care and teaching future physicians and to positively influence medicine from an academic and leadership perspective.”

Minka Schofield, MD
New Study on Kids with Cochlear Implants Is First of Its Kind

Irina Castellanos, PhD, leads efforts to understand how early cochlear implantation affects social, emotional and behavioral development

Guided by a passion to better understand how hearing loss affects kids — and bolstered by a three-year, $300,000 grant from the NIH (R21DC016134) — Irina Castellanos, PhD, assistant professor in the Department of Otolaryngology – Head and Neck Surgery, is investigating how delays in language and executive control impact psychosocial development in preschoolers with cochlear implants.

She and a team of researchers from Ohio State and Nationwide Children’s Hospital will be the first to examine how “cool” and “hot” executive functions contribute to a child’s ability to regulate his or her social, emotional and behavioral skills. Their findings could lead to new interventions for identifying, diagnosing and treating children with cochlear implants who are at high risk for poor psychosocial outcomes — and eventual problems with adaptability, depression, hyperactivity and other issues.

Early Findings Suggest Important Implications

To date, most cochlear implant research has focused on auditory and spoken language skills. Scientists have largely studied how children with hearing loss interpret sound, learn language and speak. But there is limited evidence showing how prelingual hearing loss and delayed access to spoken language may place deaf children with cochlear implants at an elevated risk for delays in executive functioning during the critical preschool period of development.

“Our preliminary research suggests children with poor language may also have poor executive functions, including attention, inhibition, concentration and working memory skills,” explains Dr. Castellanos. “Further, children with delays in executive control are at an increased risk for difficulties in psychosocial adjustment. This cascade of language and neurocognitive risks may press further downstream to produce challenges in psychosocial functioning that have a profound impact on quality of life — especially if certain psychosocial problems are not identified and addressed in early childhood.”

Longitudinal Study May Produce New Insights

The team aims to enroll 40 normal-hearing children and 40 children who received a cochlear implant by age three. During three visits over 12 months, they’ll measure each child’s language abilities, psychosocial skills and core executive functions. These include “cool” executive functions (using self-regulation to control cognition) and “hot” ones (using self-regulation to control emotions).

“Our theory is kids with better language and a stronger ability to exert executive control will have better psychosocial outcomes,” says Dr. Castellanos. “By tracking these children over time, we can see how small improvements in language and executive function impact their social, emotional and behavioral development.”

A “Whole Child” Approach to Improving Outcomes

“Following cochlear implantation, overall functional outcomes vary widely among children,” says Dr. Castellanos. “To me, this means we need to focus on the whole child instead of just the ear. Cochlear implants provide access to auditory experience, which helps many deaf children develop spoken language skills. But outcomes may be dependent on more than just the auditory nerve. We need to better understand the underlying neurocognitive factors that contribute to individual differences in children’s development following cochlear implantation.”

Dr. Castellanos hopes to generate enough pilot data to secure additional funding and expand the study. Her goal is to refine a mathematical model that allows clinicians to better predict psychosocial outcomes based on language and executive functioning skills — so children identified as high risk for maladaptive outcomes can receive individualized intervention. “Our theory is kids with better language and a stronger ability to exert executive control will have better psychosocial outcomes.” —Irina Castellanos, PhD

“Irina Castellanos working with research participant, Declan.”

“‘Our preliminary research suggests children with poor language may also have poor executive functions, including attention, inhibition, concentration and working memory skills.’” — Irina Castellanos, PhD

“Dr. Irina Castellanos working with research participant, Declan.”

NEW STUDY ON KIDS WITH COCHLEAR IMPLANTS IS FIRST OF ITS KIND

Irina Castellanos, PhD, leads efforts to understand how early cochlear implantation affects social, emotional and behavioral development
COTTON SWABS CAUSE HIGH NUMBERS OF EAR INJURIES IN CHILDREN

Investigators use media to spread injury-prevention message

Cotton-tip applicators (CTAs) like Q-tips® have been around for nearly 100 years, and the hazards they pose for ear cleaning continue to concern 21st century doctors. An estimated 263,328 children under age 18 were treated for CTA-related ear injuries in U.S. emergency departments from 1990 to 2010, reported a study published in the Journal of Pediatrics, July 2017 issue. That’s approximately 1,000 per month or 34 per day in the U.S.

The study, which began in 2011, was conducted by Nationwide Children’s Hospital Department of Pediatric Otolaryngology and its Center for Injury Prevention. The National Electronic Injury Surveillance System provided data for the study but stopped tracking injuries after 2010.

Jatana Urges Increased Education

Dr. Jatana notes that there’s a disconnect between what the medical community knows and what parents are doing. Warning labels on these CTA products have been ineffective. Many parents continue to use cotton swabs to clean their ears, and their children mimic what they see as a routine hygiene practice — like brushing their teeth.

“As otolaryngologists, we can continue to educate the community that CTAs work against the ear’s natural cleaning mechanism,” he says. “The ear canal is a self-cleaning structure that produces wax, which comes to the outer portion.”

He encourages parents and caregivers that it’s best to leave the ear canal alone and to clean the outer portion of the ear with a baby wipe or with soap and water in the bath or shower. If there is concern about excessive wax, it is best to seek advice from a medical professional on the best, individualized treatment option.

“For injuries are still happening too frequently and kids are being injured at a surprisingly high rate.”

— Kris Jatana, MD

Setting the Record Straight

Dr. Jatana notes, “There’s a public misconception that ears need to be cleaned at home and that CTAs are the tool to do that. It’s been known for a long time that it’s not safe to use CTAs to clean the ear canal. There’s a risk of perforating the eardrum, causing balance problems and irreversible hearing loss.”

He continues, “Injuries are still happening too frequently and kids are being injured at a surprisingly high rate.”

Findings from the study included:

- Younger children sustained the highest rate of injury (32.2 per 100,000 for age 0 to 3 years)
- Most CTA-related injuries in children occurred during the documented circumstance of cleaning their ears (73 percent)
- Commonly documented reasons for visiting the emergency department were foreign body sensation (39.2 percent) and bleeding (34.8 percent)
- Common diagnoses included the presence of a foreign body (29.7 percent) and tympanic membrane perforation (25.3 percent)

He reached an estimated one to two billion people through news outlets and numerous media interviews, including CNN and NBC’s “Today.”
AWARDS AND RECOGNITIONS

Oliver Adunka, MD: Selected by his peers to serve on the board of directors for the American Cochlear Implant Alliance for both The Ohio State University and Nationwide Children’s Hospital

Oliver Adunka, MD: Appointed to the Children’s Tumor Foundation Clinical Care Advisory Board

Ricardo Carrau, MD: Served as American Head & Neck Society co-chair, Endocrine Surgery Section, April 2017

Irina Castellanos, PhD: Received the American Journal of Speech-Language Pathology’s 2016 Editor’s Award for the most impactful article, meeting the highest quality standards in research design and presentation

Brad deSilva, MD/Meredith Lind, MD/Gregory Wiet, MD: Hosted a skills lab focusing on airway management and temporal bone dissection/anatomy, held in conjunction with the Student National Medical Association Regional Conference, hosted by The Ohio State University College of Medicine

Ursula Findlen, PhD: Serves as chair of the Sponsorship Committee for The Ohio Academy of Audiology

Kris Jatana, MD: Awarded the 2017 American Academy of Pediatrics Advocacy Award, Section of Otolaryngology–Head & Neck Surgery for section efforts related to the national Button Battery Task Force – given to only one person annually

Kris Jatana, MD: Serves on the CORE Research Grant Review Committee of the Academy of Otolaryngology–Head and Neck Surgery

Leslie Kim, MD: Nominated to the Ohio State Faculty Career Accelerator program

Laura Matrika, MD: Named co-chair of the Early Career Laryngologist, 2017

Laura Matrika, MD: Landed the cover article of the June 2017 issue of The Laryngoscope

Aaron Moberly, MD: Accepted for active candidacy in the Triological Society

Stephen Nogan, MD: A new collaboration began in 2017 between Dr. Stephen Nogan, a facial plastic and reconstructive surgeon at The Ohio State University, and the Department of Otorhinolaryngology in Tegucigalpa, Honduras. This summer’s inaugural educational program was limited to one day of live surgery, including rhinoplasty and facial reanimation cases. Dates are already set for 2018 with plans to expand the educational opportunities and include an additional surgeon, Garrett Choby, MD, from the Department of Otolaryngology – Head and Neck Surgery at Mayo Clinic

Bradley Otto, MD: Patient awarded – Method of Neuromodulation for the Treatment of Rhinitis, granted April 18, 2017, patent number 9,623,247

James Rocco, MD, PhD: Named co-chair of the National Cancer Institute Task Force on Recurrent Metastatic Disease

James Rocco, MD, PhD: Named chair of the American Head & Neck Society Research Committee

James Rocco, MD, PhD: Named surgical co-chair of the NRG-HN1634

Gregory Wiet, MD: Appointed to the editorial board of Society for Simulation in Healthcare

Gregory Wiet, MD: Elected the vice president for the surgical special interest group for the Society for Simulation in Healthcare

Gregory Wiet, MD: Is a member of the Simulation Education Committee, which received the 2017 Committee of Excellence Award

Our Skull Base Team had a great showing at the North American Skull Base Society meeting with 14 presentations/paerks/posters and courses. Resident Eric Mason, MD, along with surgeon Ricardo Carrau, MD, were recognized as having the most-cited article of the year in the Journal of Neurological Surgery Part B: Skull Base.

CLINICAL TRIALS

Head and Neck Oncology

Loni Arrese, PhD, SLP – Expiratory Muscle Strength Training in Improving Bulbar Function and Quality of Life in Patients With Head and Neck Cancer

Matthew Old, MD – A Phase II Randomized, Double-Blind, Placebo-Controlled Clinical Trial to Determine the Safety and Efficacy of GL-0817 (with Cyclophosphamide) for the Prevention of Recurrence in HLA-A2+ Patients With High-Risk Squamous Cell Carcinoma of the Oral Cavity.

Clinical Trial OSU 16267

Matthew Old, MD – Phase II Investigation of Adjuvant Combined Cisplatin and Radiation With Pembrolizumab in Resected HNSCC, Clinical Trial OSU 15184

Enver Ozer, MD – A Pilot Study Assessing Transoral Robotic Surgery (TORS) for Oral and Laryngopharyngeal Benign and Malignant Lesions Using the Da Vinci Robotic Surgical System

James Rocco, MD, PhD – A Phase II Study of Enzalutamide (NCIC#766085) for Patients With Androgen Receptor Positive Salivary Cancers (ALLUANCE), Clinical Trial OSU Alliance-A091404

James Rocco, MD, PhD – Phase II Randomized Trial of Adjutant Radiotherapy With or Without Cisplatin for p53 Mutated, Surgically Resected Squamous Cell Carcinoma of the Head and Neck (SICHN), ECOG-ACRIN-EA3132

Otology, Neurotology and Cranial Base Surgery

Oliver Adunka, MD – A Proposal to Evaluate Revised Indications for Cochlear Implant Candidacy for the Adult CMS Population (Co-investigators – Ed Dodson, MD, and Aaron Moberly, MD)

Oliver Adunka, MD – Clinical Evaluation of the Cochlear Nexus® CI532 Cochlear Implant in Adults (Co-investigators – Ed Dodson, MD, and Aaron Moberly, MD)

Oliver Adunka, MD – Cochlear Implantation During Vestibular Schwannoma Removal or During Labyrinthectomy Surgery for Treatment of Meniere’s Disease (Co-investigators – Ed Dodson, MD, and Aaron Moberly, MD) (has not started yet but expect IRB approval within the next month)

Aaron Moberly, MD – Aural Rehabilitation for Adults Receiving Cochlear Implants

Aaron Moberly, MD – Aural Rehabilitation for Experienced Cochlear Implant Users

RhinoLOGY

Bradley Otto, MD – A Prospective, Non-Randomized Study to Evaluate Treatment Outcome of Nasal Airway Obstruction Using the Aerin Medical Vivaerä Stylus (Co-investigators – Alex Farag, MD, and Kai Zhao, PhD)

LARYNGOLOGY

Brad deSilva, MD – Voice Outcomes Following Transcutaneous Steroid Injection for Vocal Fold Nodules Combined With Voice Therapy Compared to Voice Therapy Alone

Laura Matrika, MD – Treatment Alternatives in Adult Rare Disease; Assessment of Options in Idiopathic Subglottic Stenosis North American Airway Collaborative PR-02 Study (NoAAC PR-02 Study)

Laura Matrika, MD – Treatment of Vocal Cord Granulomas With Potassium Titanyl Phosphate (KTP) Laser vs. Traditional Proton-Pump Inhibitors (PPIs)
ACTIVE NON-NIH RESEARCH FUNDING

Lauren Bakaletz, PhD 01/01/2016–12/31/2018 Australian Government National Health and Medical Research Council APP1099279 Novel Epigenetic Regulatory Mechanisms in Moraxella Catarrhalis and Non-Typeable Haemophilus Influenzae: Impact on Vaccine Development and Role in Pathobiology

Tendy Chiang, MD 05/2016–04/2018 The Ohio State University Center for Clinical and Translational Science Davis Bremer Pre-K Award Clinical Translation of Novel Bioartificial Tissue Engineered Tracheal Grafts

Tendy Chiang, MD 08/2017 The American Lungology, Rhinological and Otological Society, Inc. AKA Triological Society Career Development Award Mechanisms of Regeneration in Tissue Engineered Tracheal Grafts

Kris Jatana, MD 09/2004–Present National Science Foundation Grant/Contact Number: EEC-0425626 NSEC Proposal for a Center for Affordable Nanoengineering of Polymer Biomedical Devices, NSF


Leslie Kim, MD, MPH 2017 FAMEPRO Grant Perioperative Use of Gabapentin to Improve Analgesia and Decrease Opioid Use in Rhinoplasty


Aaron Moberly, MD 2015–Present The Ohio State University/ NCH Discovery Research Grant AutoScope: Developing Effective Technology to Diagnose Ear Pathology, CI

Aaron Moberly, MD 2017 American Neurotology Society Research Grant Verbal Memory as Outcome Predictor in Adults With Cochlear Implants, CI

Aaron Moberly, MD 2017 Cochlear Corporation Aural Rehabilitation for Adults with Cochlear Implants, CI

Bradley Otto, MD, PI 05/19/2017–05/19/2018 Aerin Medical A Prospective, Non-Randomized Study to Evaluate Treatment Outcome of Nasal Airway Obstruction Using the Aerin Medical Vivair Stylus

PENDING RESEARCH

Pawan Kumar, PhD, MS IL-6, Nuclear import of Key Mediators, and Aggressive & Metastatic Phenotype NIH/NCI RO1CA204883-A1

Pawan Kumar, PhD, MS Novel Role of Myoferlin in IL-6 Signaling and Chemoresistance NIH/NCI RO1CA215497-01

Pawan Kumar, PhD, MS Targeting IL-6 Signaling With Bazedoxifene to Enhance the Therapeutic Efficacy of Radiation Treatment While Protecting the Bone From Osteoradionecrosis NIH/NCI R21CA16617-01

James Rocco, MD, PhD 10/01/2017–09/30/2025 NIH Head and Neck Tumor Heterogeneity R35DE027560

Kai Zhao, PhD 12/01/2017–11/31/2019 NIH/NIDCR Optimizing Surgical Outcomes to Olfactory Losses Through Endoscopic Sinus Surgery Simulator R01DE025239

PENDING PATENTS

Kai Zhao, PhD 03/08/2017 NIH/NIDCR Filed a Patent for Nasal Plug

OHIO STATE APPOINTS NEW CLINICAL FACULTY

Stephen Nogan, MD, joins the growing Division of Facial Plastic and Reconstructive Surgery

Stephen Nogan, MD, an assistant professor specializing in facial plastic surgery, will continue building his career at Ohio State. After completing a residency in Otolaryngology – Head and Neck Surgery and a fellowship in Facial Plastic and Reconstructive Surgery, both at The Ohio State University Wexner Medical Center, Dr. Nogan will perform clinical care, teaching and research at Ohio State through the Division of Facial Plastic and Reconstructive Surgery. Prior to beginning his training at Ohio State, the Pennsylvania native received his medical degree from Pennsylvania State University. It was there he discovered a passion for cosmetic and reconstructive surgery of the face and neck. In addition to academic exposure in the classroom, Dr. Nogan gained hands-on experience caring for underserved patients in Latin America in need of life-changing facial reconstruction.

Today, Dr. Nogan specializes in a variety of facial plastic and reconstructive techniques. These include facial skin cancer reconstruction, facial trauma surgery and cosmetic surgery ranging from face and neck lifts to rhinoplasty and blepharoplasty. Dr. Nogan’s research interests include narcotic use after head and neck surgery, functional outcomes after rhinoplasty, advanced techniques in aging neck surgery and reconstruction following facial dog bites. He also devotes time to humanitarian work, including patient care and medical education in Honduras.
HIGHLIGHTED PUBLICATIONS


NEW HOUSE STAFF: Fellows

**Neurology**
Jameson Mattingly, MD  
Hometown: Owensboro, Kentucky  
Undergraduate School: Western Kentucky University  
Medical School: University of Louisville School of Medicine  
Residency: University of Colorado School of Medicine  
Hobbies/Interests: Spending time with my wife Tyra, son Samuel and dog Henry, and a variety of sports/outdoor activities, including basketball, golf, hiking and skiing.

**Pediatric Otolaryngology**
Spencer Lindsey, MD  
Hometown: Walnut Creek, California  
Undergraduate School: University of California, Berkeley  
Medical School: The Ohio State University  
Residency: Georgetown University Medical Center  
Hobbies/Interests: Traveling, cooking, drumming/live music.

**Rhinology**
Devin Mistry, DO  
Hometown: Grand Rapids, Michigan  
Undergraduate School: Calvin College  
Medical School: Michigan State University College of Osteopathic Medicine  
Residency: Michigan State University, Metro Health Hospital  
Hobbies/Interests: Cycling, men’s softball, golf, piano, gardening, cooking and spending time with wife Stacy and son Cohen.

**Neurotology**
Jameson Mattingly, MD  
Hometown: Owensboro, Kentucky  
Undergraduate School: Western Kentucky University  
Medical School: University of Louisville School of Medicine  
Residency: University of Colorado School of Medicine  
Hobbies/Interests: Spending time with my wife Tyra, son Samuel and dog Henry, and a variety of sports/outdoor activities, including basketball, golf, hiking and skiing.

**Skull Base Surgery**
Kyle VanKoevering, MD  
Hometown: Grand Rapids, Michigan  
Undergraduate School: University of Michigan  
Medical School: University of Virginia School of Medicine  
Residency: University of Michigan  
Hobbies/Interests: Fishing, archery, hiking, movies.

**Allergy and Immunology**
Ruchi Singla, MD  
Hometown: West Chester, Ohio  
Undergraduate School: The Ohio State University  
Medical School: Northeast Ohio Medical University  
Residency: University of Michigan  
Hobbies/Interests: Traveling and dancing.

**Head and Neck Surgery**
Krupal Patel, MD  
Hometown: London, Ontario, Canada  
Undergraduate School: College of Arts and Science, University of Saskatchewan, Canada  
Medical School: University of Saskatchewan, Canada  
Residency: Western University, London, Ontario  
Hobbies/Interests: Traveling, cooking, drumming/live music.

**Pediatric Otolaryngology**
Spencer Lindsey, MD  
Hometown: Walnut Creek, California  
Undergraduate School: University of California, Berkeley  
Medical School: The Ohio State University  
Residency: Georgetown University Medical Center  
Hobbies/Interests: Traveling, cooking, drumming/live music.

**Rhinology**
Devin Mistry, DO  
Hometown: Grand Rapids, Michigan  
Undergraduate School: Calvin College  
Medical School: Michigan State University College of Osteopathic Medicine  
Residency: Michigan State University, Metro Health Hospital  
Hobbies/Interests: Cycling, men’s softball, golf, piano, gardening, cooking and spending time with wife Stacy and son Cohen.

**Neurotology**
Jameson Mattingly, MD  
Hometown: Owensboro, Kentucky  
Undergraduate School: Western Kentucky University  
Medical School: University of Louisville School of Medicine  
Residency: University of Colorado School of Medicine  
Hobbies/Interests: Spending time with my wife Tyra, son Samuel and dog Henry, and a variety of sports/outdoor activities, including basketball, golf, hiking and skiing.

**Skull Base Surgery**
Kyle VanKoevering, MD  
Hometown: Grand Rapids, Michigan  
Undergraduate School: University of Michigan  
Medical School: University of Virginia School of Medicine  
Residency: University of Michigan  
Hobbies/Interests: Fishing, archery, hiking, movies.
RESEARCH EXPLORES COGNITIVE FUNCTIONS AND OUTCOMES IN ADULT COCHLEAR IMPLANT USERS

Aaron Moberly, MD, investigates why some patients understand speech better than others following cochlear implantation.

Aided by a $900,000 grant from the NIH (K23DC015539-01), Aaron Moberly, MD, will spend the next five years exploring variability in speech recognition outcomes among adults with cochlear implants.

An assistant professor in the Department of Otalaryngology – Head and Neck Surgery at The Ohio State University Wexner Medical Center, Dr. Moberly hopes to answer a question that has long baffled the medical community: Why does one patient with a cochlear implant adapt well, while another patient with the same device struggles?

In his latest study, Dr. Moberly will examine the "bottom-up" and "top-down" factors that may contribute to cochlear implant performance. His goal is to help clinicians predict which patients may be at risk for poor outcomes, so those individuals can receive early and appropriate rehabilitative intervention following implantation.

Brain Function May Be as Important as Device Function

"With any cochlear implant, the auditory signal coming through the device is degraded; it sounds nothing like normal speech," says Dr. Moberly. "It takes the brain a while to adjust to and make sense of this new sound."

To date, most of the research related to adult cochlear implant users has focused on the device itself. Scientists are primarily interested in the quality of the signal coming through the device and whether new devices can improve clarity.

"The quality of the signal may be important, but perhaps equally important is how the brain interprets and uses that signal," says Dr. Moberly. "We need to study how these factors interact. Does the combination of cognitive skills and the quality of the auditory signal contribute to performance? Or are people with better cognitive functions more likely to have a good outcome no matter how degraded the signal?"

Gaining New and Unique Insights

To find out, Dr. Moberly and his team are enrolling cochlear implant users who have had their device several times before and after implantation to see if cognitive functioning changes as a result of implantation.

"Our findings will have important theoretical and clinical implications," explains Dr. Moberly. "They'll help us understand how a period of auditory deprivation impacts top-down cognitive skills. And they'll shed light on how adults with hearing loss use their cognitive skills to recognize speech."

Dr. Moberly says the growth of our aging population means clinicians are treating more and more people with acquired hearing loss. But among those patients who receive a cochlear implant, up to 15 percent do not benefit substantially.

"That’s why our research is so meaningful," he adds. "If we can predict who is likely to need extra help, we can intervene with custom aural rehabilitation and speech-language therapy. This may dramatically improve quality of life for many people affected by severe hearing loss.”

CARRAU NAMED TO SHEPARD JONES HEAD AND NECK ONCOLOGY PROFESSORSHIP

Ohio State appointment will advance Dr. Ricardo Carrau’s research in skull base surgery

International pioneer in endoscopic skull base surgery Ricardo Carrau, MD, has been honored as the inaugural holder of Ohio State’s new Lynne Shepard Jones Endowed Professorship in Head and Neck Oncology.

Dr. Carrau joined Ohio State in 2011 as professor of Otolaryngology – Head and Neck Surgery and director of the skull base surgery program. In addition to open and endoscopic skull base surgery, his clinical and research interests include head and neck surgical oncology, swallowing disorders, salivary gland disorders and endoscopic sinus surgery.

"It is a great honor to hold this professorship and to have the opportunity to extend the work we’re doing in skull base surgery," Dr. Carrau says.

"I am deeply grateful to the Shepard family for their support. Our hope is to continue to refine and improve our surgical techniques, develop alternative and more effective treatments that better preserve the quality of life of our patients and share our knowledge with other physicians around the world.”

Long-time Ohio State donor Art Shepard, now age 106, has provided the funding for the professorship in honor of his daughter Lynne Shepard Jones, who passed away from cancer in 2003. A former chair of Ohio State’s President’s Club, Shepard is passionately committed to advancing head and neck cancer research.

"Art Shepard wanted to honor an innovative, excellent surgeon to move the field forward," says Theodoros Teknos, MD, former chair of the Department of Otolaryngology – Head and Neck Surgery. "Dr. Carrau is a national leader and technical marvel at endoscopic skull base surgery. This professorship will allow him to continue to innovate in the field.”
RENOVED VESTIBULAR SCIENTIST JOINS OHIO STATE AND THE NAVY’S AEROMEDICAL RESEARCH UNIT

Daniel Merfeld, PhD, will help create national center of excellence in vestibular function

Compared to other human sensory systems, the vestibular system is not well understood. But when it’s impacted by aging, illness or injury, the effects can be life-threatening. Studies suggest up to 150,000 Americans die every year from falls linked to vestibular problems.

Daniel Merfeld, PhD, intends to help reduce morbidity and mortality associated with vertigo, imbalance, spatial disorientation and other symptoms of vestibular dysfunction. With nearly 30 years of experience researching dynamic systems and vestibular function and a new career with unmatched opportunities, he is uniquely positioned to tackle the public health impact of vestibular disorders.

In 2017, Dr. Merfeld transitioned his research, including three NIH grants, to the Department of Otolaryngology – Head and Neck Surgery at The Ohio State University. He’s also been named senior vestibular scientist for the Naval Medical Research Unit – Dayton (NAMRU-D), the Navy’s aviation-related medical research program housed at Wright-Patterson Air Force Base, Ohio.

Even though Dr. Merfeld divides his time between two very different institutions, his work will unite civilian and military efforts to better understand and treat vestibular disorders. Together, Ohio State and NAMRU-D possess the resources and expertise to help lead the nation in vestibular care and research.

An Interest in Space Leads to a Focus on the Inner Ear

In 1982, Dr. Merfeld was a recent college graduate with a degree in mechanical engineering and a lifelong fascination with space. Those personal interests, combined with career uncertainty, led to a master’s degree in mechanical and aerospace engineering from Princeton University. And a chance encounter with a magazine landed him at Massachusetts Institute of Technology, where he earned a PhD in biomedical engineering.

“About a year after grad school, I happened to read a magazine article about MIT scientists studying the effects of space flight on astronauts,” says Dr. Merfeld. “I got in touch with them, submitted my application and, to my surprise, was admitted to their PhD program. During my time there, I participated in three investigations looking at vestibular function before and after space flights. And that’s when I became enamored with this part of the inner ear that still holds so many mysteries.”

Career Highlights

Dr. Merfeld’s introduction to (and fascination with) the vestibular system launched a prolific career that has already influenced the field.

In 1999 he founded the Jenks Vestibular Physiology Laboratory at Massachusetts Eye and Ear. During his 18 years as director, Dr. Merfeld and his colleagues studied vestibular function using behavioral measures such as assays of balance, perception and the vestibulo-ocular reflex. Their efforts have led to new insights, including:

- Showing that tilt and translation perception result from multisensory signal convergence
- Confirming the nervous system uses rotational signals from inner ear canals to help us keep track of the relative orientation of gravity
- Demonstrating for the first time that vestibular perception and action can use qualitatively different neural mechanisms

“Dr. Merfeld is the brains behind much of what’s going on with vestibular research,” says Oliver Adunaka, MD, vice chair of Clinical Operations and director of Neurotology at Ohio State. “His work has shown how the brain processes certain ambiguous vestibular signals, which is key to figuring out how to help people with vestibular disorders.”

Dr. Merfeld and his team at the Jenks Lab were also the first to design and study vestibular implants for patients with severe bilateral vestibular loss. They’ve licensed their patents to a commercial company that hopes to bring the device to market soon.

Exciting New Opportunities

In his new role at NAMRU-D, Dr. Merfeld will lead research initiatives to enhance safety among military pilots, with a goal of translating key findings to the general population.

Recent military estimates suggest motion-related mishaps in the Air Force alone may be responsible for $2 billion in lost aircraft — and too many lost lives.

“At as of 2016, NAMRU-D is home to a groundbreaking new disorientation research device nicknamed ‘the Kraken.’ It uses all six degrees of freedom and up to three Gs of force to simulate the conditions pilots go through. Even though my role is specifically with the Navy, the device will allow researchers from all branches of military and NASA to further study how motion and acceleration affect balance and spatial orientation.”

Dr. Merfeld is also integrating his active scientific studies with the existing vestibular care and research programs at Ohio State.

continued on page 21
ACTIVE NIH FUNDING

Lauren Bakaletz, PhD
09/30/1999–07/31/2020
NIH/NIDCD
R01DC003915

Lauren Bakaletz, PhD
07/20/2011–08/31/2021
NIH/NIDCD
R01DC11818

Lauren Bakaletz, PhD
08/01/2016–07/31/2021
NIH/NIDCD
R01DC015688

Irina Castellanos, PhD
04/01/2017–03/31/2020
NIH/NIDCD
R21DC016134

Tendi Chiang, MD
07/14/2017–06/30/2022
NIH/NHLBI
K08HL138460-01

Derek Houston, PhD
12/1/2015–06/30/2020
NIH/NIDCD
R01DC008581

Pawan Kumar, PhD, MS
07/01/2014–07/31/2018
NIH/NCI
R21CA178649

James Lang, PhD
06/01/2017–05/30/2022
NIH/NCI
R01CA211611-01A1

Daniel Merfeld, PhD
07/01/2012–06/30/2018
NIH/NIDCD
R01DC015258-05

Daniel Merfeld, PhD
12/01/2013–11/30/2018
NIH/NIDCD
R01DC013069-04

Daniel Merfeld, PhD
03/01/2017–02/28/2018
NIH/NIDCD
R21DC014909-02

Daniel Merfeld, PhD
07/01/2017–06/30/2018
NIH/NIDCD
R01DC014924-03

Aaron Moberly, MD
04/01/2017–03/31/2022
NIH/NIDCD
K23DC015539-01

Quintin Pan, PhD
04/08/2015–03/31/2020
NIH/NCI
R01CA193590

Quintin Pan, PhD
05/06/2015–04/30/2020
NIH/NIDCR
R01DE023555

Quintin Pan, PhD
02/01/2016–01/31/2020
NIH/NGMS
R01GM11792

Quintin Pan, PhD
09/01/2017–08/31/2022
NIH/NCI
R01CA223207

James Rocco, MD, PhD
2015–2018
NIH/NIDCR
R01DE022087-01

James Rocco, MD, PhD
2013–2018
NIH
R01DE022087-03

Kai Zhao, PhD
12/1/2014–11/30/2018
NIH/NIDCD
R01DC013626

VESITIBULAR SCIENTIST CONTINUED FROM PAGE 19

He says he’s excited about the possibilities associated with one of his NIH-funded studies, “Employing Vestibular Thresholds to Improve Patient Diagnosis” (R01DC014924). Building on his previous studies that measured and established vestibular thresholds, Dr. Merfeld and his team aim to improve diagnosis of episodic vertigo caused by Meniere’s disease, benign paroxysmal positional vertigo and other vestibular disorders.

“Symptoms like balance and vertigo are nebulous,” says Ted Teknos, MD, former chair, Department of Otolaryngology – Head and Neck Surgery at Ohio State. “Patients report that they’re dizzy, but dizziness is hard to quantify. And that’s why Dr. Merfeld’s research is so meaningful. He’s developing tests where you can quantify balance dysfunction on a scale and creating benchmarks to identify and treat people who are at risk.”

A Catalyst That Could Spur Screenings

Roughly 40 percent of us will experience dizziness or other vestibular symptoms during our lifetime. That’s a staggering percentage of the population that may be at risk for falls. Equally shocking, up to 30 percent of patients with symptoms don’t get a clear diagnosis. Screening mechanisms are still in the research phase. But Dr. Merfeld and his colleagues may be instrumental in guiding development of the world’s first tests to objectively identify people who may have some vestibular dysfunction, so they can receive early and effective rehabilitation or other interventions.

“Dr. Merfeld is both a thought leader and a collaborator,” says Dr. Teknos. “With his experience and leadership, we are poised to create a national center of excellence in vestibular function that spans our entire university community and our new military partner. This opens up unprecedented research opportunities that could change how we diagnose and treat patients with vestibular disorders.”

“I’ve been nurturing the concept of a national balance and vestibular center for many years and am thrilled that Ohio State and NAMRU-D share this same vision,” adds Dr. Merfeld. “It’s an idea whose time has come. And looking ahead, if 20 years from now we’ve at least begun a vestibular and balance public health screening that leads to improved outcomes, that would be the capstone in what’s been a very fulfilling career.”
Amit Agrawal, MD, assumes leadership role at one of the nation’s foremost cancer hospitals

Amit Agrawal, MD, associate professor in the Department of Otolaryngology – Head and Neck Surgery at The Ohio State University as an assistant professor, in addition to teaching residents and medical students from the university, he will provide medical and surgical care through the Division of Pediatric Otolaryngology at Nationwide Children’s Hospital.

Prior to completing his fellowship in Pediatric Otolaryngology at Baylor College of Medicine in June 2017, Dr. Agrawal spent five years in the Otolaryngology – Head and Neck Surgery residency program at Thomas Jefferson University in Philadelphia.

As a resident, Dr. Agrawal realized a passion for helping children; “I enjoy forming relationships with children and their families,” he says. “Seeing a smile on a young patient’s face is inspiring. Earning a child’s trust and being able to provide help for their health problems is thoroughly rewarding.”

Dr. Agrawal’s clinical interests include complex airway surgery, sinus surgery and surgical treatments for sleep disordered breathing.

A former competitive swimmer who finished seventh at the U.S. Olympic Trials in 2004, Dr. Agrawal says he looks forward to continuing his career at The Ohio State University and Nationwide Children’s Hospital.

“Our Pediatric Otolaryngology team has a wealth of subspecialty experience, including hearing loss, sinonasal problems and voice and swallowing disorders,” he says. “I look forward to learning from and working alongside my new colleagues as I build my practice.”

Meredith Lind, MD, embraces new leadership opportunity

Meredith Lind, MD, assistant professor in Ohio State’s Department of Otolaryngology – Head and Neck Surgery, has been elected the next president of Nationwide Children’s medical staff. Her four-year term, starting with two years as vice president, began Jan. 1, 2018, with her term as president to begin in January 2020.

Dr. Lind has substantial experience in leadership roles. The Ohio native is associate director of Ohio State’s Otolaryngology residency program and helped develop and oversee Nationwide Children’s Pediatric Aerodigestive Disorders Clinic. But it was her appointment to Nationwide Children’s medical executive committee that first sparked an interest in getting more involved in hospital governance.

“I really enjoyed sitting on the medical executive committee as a surgical representative, because I got to witness a lot of forward movement of policies and other activities related to hospital supervision,” says Dr. Lind. “I realized I liked being able to help guide decisions that help our hospital expand and provide great care to more children in our community.”

During her tenure, Dr. Lind will work closely with hospital leadership on activities that affect physicians, including credentialing and medical staff bylaws.

“After moving away for my residency and fellowship training, I was given an outstanding opportunity to come back to Columbus and join Nationwide Children’s in 2008,” adds Dr. Lind. “Since then I’ve been impressed with our administration’s commitment to growing not just the Department of Pediatric Otolaryngology, but the hospital as well. I’m honored to have been appointed to this new role and look forward to working with a strong group of leaders on behalf of my colleagues.”

Kara Wada, MD, joins the innovative Center for Sinus and Allergy

Kara Wada, MD, joins The Ohio State University Wexner Medical Center and Nationwide Children’s Hospital, Kara Wada, MD, has formally joined Ohio State as an assistant professor. In addition to her medical education and research activities, she cares for pediatric and adult patients through The Ohio State University Center for Sinus and Allergy.

Dr. Wada first became interested in immunology through her undergraduate work in biochemistry. After participating in a course that partnered students with a biotech firm specializing in immunology research, she landed an internship that provided exposure to the laboratory side of immunology. From there, she obtained her medical degree from the University of Illinois and completed a four-year residency in Internal Medicine and Pediatrics at Ohio State.

“The specialty of allergy and immunology is a great fit because it’s a blend of science and patient care,” says Dr. Wada. “I get to be involved in research without sacrificing clinical care. I enjoy working with kids and adults. It’s fun and satisfying to help people find the best way to manage their symptoms.”

Dr. Wada treats a wide variety of allergic and immunologic conditions, ranging from allergic rhinitis and asthma to urticaria and eosinophilia. She is also one of the only specialists in the region offering personalized sublingual immunotherapy as an alternative treatment for certain allergies.
FACIAL REANIMATION SURGERY RESTORES SMILES, NATURAL FACIAL EXPRESSIONS

Nerve and muscle transfers among latest microsurgical techniques

Smiling and closing our eyes are spontaneous acts most of us do without thinking. For people with facial paralysis, however, facial nerve injury and/or inflammation with resultant facial muscle atrophy can prevent natural facial expressions and destroy self-confidence.

A multidisciplinary facial reanimation program is taking shape at The Ohio State University Wexner Medical Center and Nationwide Children’s Hospital to address both congenital and acquired facial paralysis. Leading the effort is Leslie Kim, MD, MPH, director of Facial Plastic and Reconstructive Surgery in the Department of Otolaryngology – Head and Neck Surgery.

Dr. Kim, who returned to Ohio State in 2016, successfully performed the center’s first free gracilis muscle transfer for dynamic smile restoration. Patients with irreversible congenital and acquired facial paralysis of prolonged duration have benefited from this surgery. Dual reinnervation of the free gracilis muscle with both the cross-facial nerve graft from the contralateral facial nerve and the masseteric nerve (or hypoglossal nerve) is most preferred by her patients, which she has performed in both single and dual stages. The temporalis tendon transfer procedure is also performed frequently for patients who are not candidates for free gracilis muscle transfer.

She works closely with the head and neck oncologic surgeons and neurologists in the department to provide comprehensive care. Nerve transfer surgery performed concurrently at the time of facial nerve sacrifice in parotid cancer extirpation or early nerve transfers in patients who have undergone vestibular schwannoma resection have helped patients preserve innervation of their native facial musculature and recover early smile function.

Dr. Kim also treats many patients who have recovered from facial nerve insult with varying degrees of synkinesis. Judicious use of botulinum toxin injections and facial neuromuscular retraining therapy with a speech and language pathologist here at Ohio State have helped patients improve facial function and symmetry as well as improve quality of life. Selective neurolysis surgery is performed sparingly in patients with severe symptoms refractory to conservative treatment.

“Facial paralysis is a devastating condition with profound functional, aesthetic and psychosocial implications. The inability to smile is particularly distressing to patients, so we feel fortunate to be able to now offer more for patients in central Ohio and beyond.”

—Leslie Kim, MD, MPH

Before and six months after single-stage free gracilis muscle transfer for smile restoration in a patient with irreversible facial paralysis with dual reinnervation by the masseteric nerve and contralateral facial nerve via cross-facial nerve graft.

Before and after botulinum toxin injections and facial neuromuscular retraining therapy to improve facial symmetry and movement in a patient with incomplete facial paralysis with synkinesis.

OTOLARYNGOLOGY PHYSICIAN APPOINTED INTERIM PRESIDENT FOR OHIO STATE PHYSICIANS

L. Arick Forrest, MD, MBA, brings diverse talents to new post

L. Arick Forrest, MD, MBA, the newly appointed interim president for Ohio State’s 1,500 academic and community-based physicians, brings a breadth of experience as he leads the OSU Physicians/Faculty Group Practice.

Dr. Forrest has worked in both private practice and the academic world. He will continue to practice otolaryngology, which fosters close collaboration among specialists and offers insight into both surgical and nonsurgical fields.

He is currently vice dean for Clinical Affairs for Ohio State’s College of Medicine. He completed undergraduate and graduate studies and a residency program at Ohio State, and serves as medical director of Ohio State’s Ambulatory Services. He was previously director of the Otolaryngology residency program. In his new role, he oversees not only clinical practice but also administrative functions such as billing, IT and compliance for physician practices.

“I feel very loyal to the university and want to make this a better place for patients and for doctors and nurses to work,” Dr. Forrest says.

“Taking on this position is an honor. We’re in a tremendous growth phase, adding a new main hospital and four ambulatory clinics. It’s a privilege to lead in this role.”

Otolaryngology Administrator Mark Inman says, “Dr. Forrest is very engaging and will work well with chairs, physicians and staff. He’s willing to ask people for their opinions and thoughts. That’s what you really want from a leader.”

Dr. Forrest highly values transparent communication and leadership development. “I want to find out doctors’ personal goals and help them attain those goals to get the position they want.”
DONATION FUNDS RESEARCH AT BUCKEYE CENTER FOR HEARING AND DEVELOPMENT

Studies to focus on language development in babies with cochlear implants

Jim Shoup knows what it’s like to raise a child who is deaf. His son was born profoundly deaf in 1964, and he has seen people in the deaf community struggle to find their place in society.

To advance hearing research, Shoup recently made a $127,000 donation to the Buckeye Center for Hearing and Development at Ohio State. A graduate of The Ohio State University and a retired businessman, Shoup is strongly committed to efforts that restore hearing in people who are deaf.

“I’m trying to put money in people’s hands to do good. I believe in this university and the hard work of technical people who want to make a better place for us,” Shoup says.

Shoup’s donation will fund clinical intervention studies with babies who have received cochlear implants for severe to profound hearing loss. Derek Houston, PhD, associate professor in the Ohio State Department of Otolaryngology – Head and Neck Surgery and director of research for the Buckeye Center, will lead the studies.

Helping Children With Cochlear Implants Overcome Learning Obstacles

Dr. Houston and his team are devising clinical intervention studies to find ways to assist parents and other caregivers in the home to help children age 12 months and under adapt to their cochlear implants. Without follow-up intervention, these babies have challenges interpreting the sounds they hear and learning spoken language.

“The cochlear implant doesn’t automatically fix everything, even if implanted at an early age,” Dr. Houston explains. “We want to develop evidence-based methods to guide parents in creating a language environment that allows their children to succeed in speaking and understanding spoken language.

Learning language is so easy for kids with normal hearing, but for children born deaf, their brains have to work a lot harder.”

Putting the Donation to Work

Dr. Houston stresses the importance of Shoup’s donation in funding this first phase of clinical intervention studies, where researchers will analyze audio recordings of speech to children in their homes and parent/child language interactions. They also will provide the parents with feedback to help enrich the child’s language environment.

“Our results could lead to a larger-scale, randomized, controlled clinical trial funded by the NIH or other agencies down the road.”

Shoup and his late wife had set up an endowment fund for hearing research in 1999, but he has since decided to make the full donation immediately available for research.

“It’s time to put this money to work. I want deaf people to hear like people with normal hearing. Whatever I can do to make that happen, count me in,” Shoup says.

Dr. Houston adds, “Mr. Shoup has a great appreciation for the importance of helping children with hearing loss acquire communication tools early on. This gift shows he’s very committed to seeing this work happen, and we are deeply grateful for his generosity.”

He continues, “We want to develop evidence-based methods to guide parents in creating a language environment that allows their children to succeed in speaking and understanding spoken language. Learning language is so easy for kids with normal hearing, but for children born deaf, their brains have to work a lot harder.”

IMMUNOTHERAPY RESEARCH GETS BOOST FROM ENDOWMENT

Sally Millett honors son’s memory with donation for adenoid cystic carcinoma research

The Ohio State Department of Otolaryngology – Head and Neck Surgery makes advances in research and treatment because of Ohio State’s generous community advocates, such as Sally Tyler Millett of Atlanta, Georgia. Recently, Millett started a $250,000 endowment to support the research of young Ohio State investigators into head, neck and throat cancers.

Sally has a personal interest in eradicating adenoid cystic carcinoma (ACC); her son Doug lost his battle with this rare and aggressive orphan cancer 15 months after he was diagnosed. Despite the tragedy, Sally fights on, seeking information about ACC and advocating for better understanding and a cure.

“Doug was treated at Ohio State, Sally brought her philanthropic support to The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC – James) in Columbus, where she raised her family and where she has confidence in the institute’s research.”

The Douglas Tyler Millett Endowed Fund for Research in Head and Neck Cancer, named in honor of her late son, is Sally’s investment in the future. According to Sally, this is her way “to lead by example here in support of orphan cancers — and young investigators with new approaches.”

“Sally’s generous donation will allow us the opportunity to address this oversight and focus on the development of designer drugs that will selectively kill ACC cells and potentially cure this disease.”

— Quintin Pan, PhD
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