



MUSC Cochlear  
Implant Program  
Celebrates 20 Years  
(page 8)





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Head & Neck Surgery

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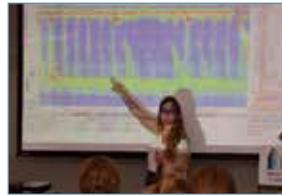
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# the SCOPE

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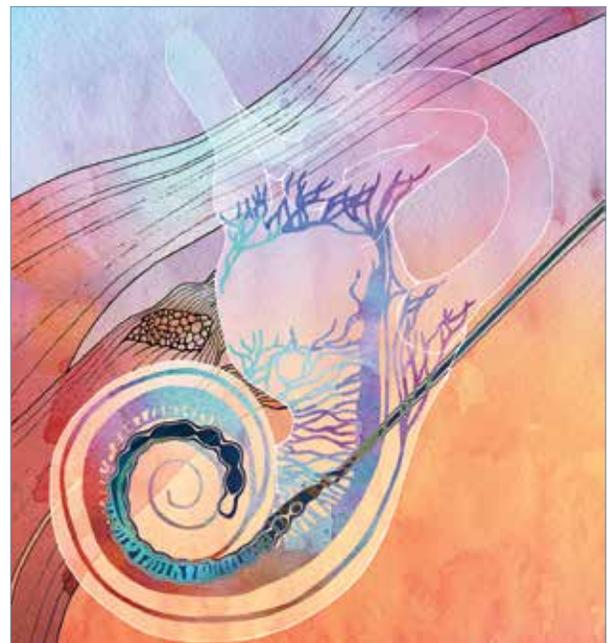


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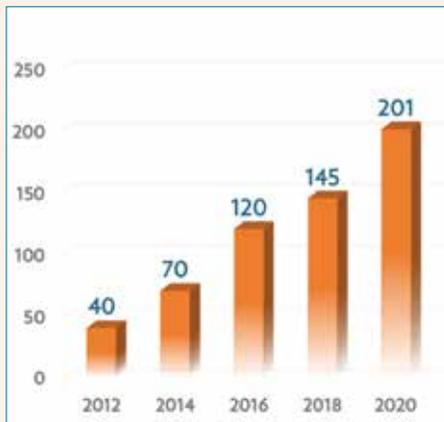
## Chairman's Corner

I am compelled to preface my comments with the acknowledgement that these last months have been difficult beyond what many of us have ever experienced. Especially heart-rending has been the pandemic's taking of so many lives - including within our own Department's extended family; I know we are not unique. It seems incongruous to note celebratory milestones within this context, but perhaps that change of focus is exactly what we do need in the midst of all this.

I simply can't praise our faculty and clinical care teams, our research enterprise, and all our staff enough for their expertise, dedication and amazing work ethic that have enabled these milestones.

### 1. 1,500th Cochlear Implant

Earlier this year we implanted our 1,500th patient. In the last decade we have averaged more than 100 cochlear implants per year. Read more about our program on pages 8 to 11.



### 2. More than 200 publications in FY2020

Eight to nine years ago, our annual publications approximated 40, and they have been steadily increasing since. Although our faculty has expanded by about 1/3 in the last decade (currently 25 M.D.s and four Ph.D.s), our peer reviewed publications have increased more than five times. Remarkable! Mentorship, aligning incentives, and new energetic faculty focused on academic excellence are just some of the drivers of this achievement.

### 3. First Virtual CME Course

We typically conduct seven to eight nationally advertised CME courses each year. We canceled our 20th Annual Magnolia Conference in May because of the pandemic, but held our 10th Annual Charleston Literature Review Course virtually in August. Although we missed the ambiance of beautiful Kiawah Island, the course was a great success with 43 participants from 13 states (California to Texas to New York) and one foreign country. A hybrid approach for CME in the future may offer distinct advantages.

### 4. #13 USNWR Ranking

Although we all recognize the imprecision and inconsistencies year to year in this and other similar rankings, it would be disingenuous to say we don't strive for and appreciate the approbation. My congratulations to each individual in our department on this collective achievement!

May each of you, your loved ones, and your colleagues stay safe and well.

Sincerely,

*Paul R. Lambert, M.D.*

Paul R. Lambert, M.D.

Professor and Chair

Department of Otolaryngology - Head & Neck Surgery

# Continuing Education



These courses were cancelled this year due to the pandemic. We hope you will join us for these and other conferences in 2021.

## Southern States Rhinology Course

April 22-24, 2021

## The 20th Annual Charleston Magnolia Conference

June 4-5, 2021

## The Charleston Vestibular Update

November 2021

## F. Johnson Putney Lectureship in Head & Neck Cancer

The 35th Annual Lectureship was held November 1, 2019 at the MUSC Hollings Cancer Center under the direction of **Terry A. Day, M.D.** and **David R. Neskey, M.D., MSCR, FACS.** Keynote speaker was **Eben L. Rosenthal, M.D.,** Stanford Cancer Center. World class HN specialists discussed improving quality of health care for patients with HN cancer.

## The Charleston Pharyngoesophageal Manometry Training Program

This second annual 1-1/2 day course was held January 10 - 11, 2020 at the MUSC East Cooper Medical Pavilion directed by **Ashli K. O'Rourke, M.D.** The keynote speaker was **Gregory N. Postma, M.D.** of the Medical College of Georgia. It was designed for speech language pathologists, laryngologists, and otolaryngologists, and consisted of didactic sessions, hands on training experiences, and real patient case examples to expand the participants' understanding of pharyngoesophageal manometry. Attendees came from 16 states across the US. Stay tuned for the info on our January 2021 conference.

## The Carolinas Pediatric Airway Course

This two-day resident training course was co-directed by MUSC's **David R. White, M.D.** and UNC's **Carlton J. Zdanski, M.D.** February 6 & 7, 2020. It included lectures and hands-on labs focused on pediatric endoscopic and open airway surgical techniques. Residents and faculty participated from seven colleges: MUSC, Children's Hospital of Georgia, Duke, Emory, Stanford Children's Health, UNC, and Wake Forest.

## The Charleston Pediatric ENT Update

The seventh annual conference, directed by **David R. White, M.D.** was held February 8, 2020 at the Courtyard Marriott Historic District. This comprehensive full-day course, designed for pediatricians, family practitioners, and otolaryngologists, provided up-to-date guidelines to implement into daily practice, promote quality and efficient care, and tackle challenging ENT diagnoses with confidence. Keynote speaker was **Doug Sidell, M.D.,** of Stanford Children's Health. Participants traveled from five states, as far as New York.

## The Charleston Course, 10th Annual Otolaryngology Literature Update

Our 10th Annual Charleston Literature Update Course was held virtually in August this year, directed by Department Chair **Paul R. Lambert, M.D.** Although we missed the ambiance of beautiful Kiawah Island, the course was a great success with 43 participants from 13 states (California to Texas to New York). They enjoyed the two days of our faculty's critical analysis of the year's most relevant, evidence-based medical literature.



## Publications Passed the 200 Mark!

In 2020, the MUSC Department of Otolaryngology - Head & Neck Surgery published 201 articles across 79 national/international medical journals.

Journal	#
Aesthetic Surgery Journal	1
AJNR American Journal of Neuroradiology	1
Allergy	1
American Journal of Audiology	1
American Journal of Otolaryngology	2
American Journal of Rhinology & Allergy	7
American Journal of Speech Language Pathology	1
Audiology Neuro-otology	1
BMC Cancer	1
BMC Geriatrics	1
BMJ Case Reports	2
Cancer	2
Cancer Research	1
Cancers (Basel)	1
Clinical Cancer Research	1
Clinical Gerontologist	1
Comm for Statistical Applications & Methods	1
Cortex	1
Dysphagia	4
Ear & Hearing	2
Ear Nose Throat Journal	1
European Archives of Oto-Rhino-Laryngology	2
European Journal of Immunology	1
Facial Plastic Surgery & Aesthetic Medicine	1
Frontiers in Cellular and Infection Microbiology	1
Frontiers in Neurology	1
Frontiers in Psychiatry	1
Head & Neck	11
International Forum of Allergy & Rhinology	20
Int'l Journal of Pediatric Otorhinolaryngology	12
JAMA Facial Plastic Surgery	1
JAMA Otolaryngology-Head & Neck Surgery	13

Journal	#
Journal of Assn for Research Otolaryngology: JARO	1
Journal of Clinical Neuromuscular Disease	1
Journal of Clinical and Translational Science	1
Journal of Laryngology & Otology	1
Journal of Neurophysiology	1
Journal of Neuroscience Methods	1
Journal of Neuroscience Research	1
Journal of Pediatric Surgery	2
Journal of Rheumatology	1
Journal of Speech, Language, & Hearing Research	1
Journal of Voice	3
Laryngoscope Investigative Otolaryngology	2
NeuroImage	2
Oral Oncology	3
Otolaryngology Clinics of North America	1
Otolaryngology Head & Neck Surgery	14
Otology & Neurotology	13
Pediatric Radiology	1
Pediatric Research	1
Plastic & Reconstructive Surgery	1
Psycho-oncology	1
Rhinology	1
The Annals of Otology, Rhinology, & Laryngology	4
The Cleft Palate-Craniofacial Journal	2
The Journal of Acoustical Society of America	1
The Journal of Allergy & Clinical Immunol. In Pract	2
The Laryngoscope	10
Trends Hearing	1
World J of Otorhinolaryngology - H&N Surgery	11
Other Journals	18
<b>Total articles</b>	<b>201</b>



## Meet Will Carroll!

**William W. Carroll, M.D.**, joined the Department of Otolaryngology - Head and Neck Surgery and the MUSC Shawn Jenkins Children's Hospital in August 2020, from the Medical College of Georgia where he was an attending pediatric otolaryngologist for two years after completing his fellowship in pediatric otolaryngology at the University of Minnesota.

Dr. Carroll grew up in North Carolina and graduated from Davidson College. During college, he played four years of varsity soccer for the mighty Davidson Wildcats. In 2012, he received his M.D. from the Medical University of South Carolina, where he subsequently completed his residency in otolaryngology.

Dr. Carroll received his board certification from the American Board of Otolaryngology in 2018.

Dr. Carroll's clinical practice is focused on the care of children with ear, nose, and throat problems, with a particular emphasis on upper airway problems and speech/velopharyngeal disorders. He has authored more than 15 papers and book chapters in the medical literature, and he has given numerous presentations at both the regional and national levels.

In his free time, Dr. Carroll enjoys spending time outdoors with his family. □



## Honors and Awards



### Judy R. Dubno, Ph.D. Honored by ASA

The Acoustical Society of America (ASA) recently announced that **Judy R. Dubno, Ph.D.** has been named the recipient of the 2020 ASA Gold Medal, which is the highest award given to a member of the Society. Dr. Dubno's award citation reads: "For contributions to understanding age-related hearing loss and for leadership in the acoustics community."

### Krishna G. Patel, M.D., Ph.D. Appointed to ABOHNS

This summer, **Krishna G. Patel, M.D., Ph.D.** was appointed to the Board of Directors for the American Board of Otolaryngology Head and Neck Surgery (ABOHNS). The ABOHNS is the specialty certifying body for all American Otolaryngology Head and Neck surgeons. This prestigious appointment is made up of 19 Directors selected amongst all Otolaryngologist within the United States. Previous directors of ABOHNS from MUSC have included past faculty, **M. Boyd Gillespie, M.D.**, and a past president of the Board was our own MUSC chairman, **Paul R. Lambert, M.D.**





**Ashli K. O'Rourke, M.D. Appointed to BOD and Recipient of Endowed Chair**

Ashli K. O'Rourke, M.D. was elected to the **Board of Directors** of the International Dysphagia Research Society (DRS) and serves as Bylaws Committee Chair.

DRS is a multidisciplinary society whose goal is to improve the quality of life of patients with dysphagia through sharing the advances in science and education.

Dr. Ashli K. O'Rourke was appointed to the Mark and Evelyn Trammell Endowed Chair in Otolaryngology in 2020. This Chair was made possible by the generosity of the Mark and Evelyn Trammell Foundation of Atlanta. **Bonnie Martin-Harris, Ph.D.** established the relationship with the Foundation and created the Evelyn Trammell Institute for Voice and Swallowing (ETIVS) nearly 20 years ago. The MUSC ETIVS was the first in South Carolina to provide a multidisciplinary center for the evaluation, treatment and clinical research of laryngeal, voice, and swallowing disorders for adults and children.

**Promotions**



**David M. Neskey, M.D., MSCR, FACS**  
Associate Professor



**Krishna G. Patel, M.D., Ph.D.**  
Professor



**Habib G. Rizk, M.D., MSc**  
Associate Professor

**Award of Tenure**



**Mark A. Eckert, Ph.D.**  
Professor

## Our Fellowship Programs

**M**USC offers otolaryngology fellowships in five subspecialties. In addition to an extensive surgical experience, fellows benefit from a multidisciplinary approach by participating in outpatient clinics, rounds, and didactic conferences.

### Facial Plastic & Reconstructive Surgery

This is a one-year non-accredited fellowship under the mentorship of **Krishna G. Patel, M.D., Ph.D.** The fellow will also work with **David Chen, M.D.**, and **Judith M. Skoner, M.D.** The program offers comprehensive training in the FPRS specialty including rhinoplasty, craniofacial, facial reanimation, facial trauma, and local reconstruction to prepare the fellow for practice as a subspecialty trained Facial Plastic & Reconstructive Surgeon. Fellows participate in the education of residents and medical students. The fellow receives graduated responsibility throughout the year, with an opportunity for increasing independence with advancing technical skill level and familiarity with the procedures.

### Head and Neck Oncology and Microvascular Reconstruction

Under the direction of **Terry A. Day, M.D.**, this program provides the highest level of training in the management and surgical treatment of head and neck cancer. Additional clinical faculty include **Evan M. Graboyes, M.D., FACS**, **Joshua D. Hornig, M.D., FACS(C)**, **Eric J. Lentsch, M.D., FACS**, and **David M. Neskey, M.D., MSCR, FACS**. Each Fellow enters as Clinical Instructor level faculty and has appointments at academic and private hospitals while performing approximately 280 major cases per year as primary surgeon. The MUSC Head and Neck Tumor Center is one of the largest programs in the US devoted to the care of the head and neck cancer patient. The program is based within the Wellin Head and Neck Clinic and partners with MUSC Hollings Cancer Center, the only NCI-designated cancer center in South Carolina.



Learn about our fellowship programs on our website at [musc.edu/ent](http://musc.edu/ent)

### Neurotology

In 2018, the Neurotology Fellowship was accredited by the ACGME under the directorship of **Ted A. Meyer, M.D., Ph.D.** Additional clinical faculty include **Paul R. Lambert, M.D.**, **Ted R. McRackan, M.D., MSCR**, and **Habib G. Rizk, M.D., MSc.** This two-year program accepts one fellow every two years. The fellowship provides a comprehensive experience in these areas of otology and neurotology: audiological testing, management of patients with hearing loss, vestibular testing, management of patients with vestibular disorders, facial nerve disorders, tumors of the cerebellopontine angle and other lateral skull base tumors, temporal bone malignancies, and the management of CSF otorrhea, among others.

### Complex Pediatric Otolaryngology

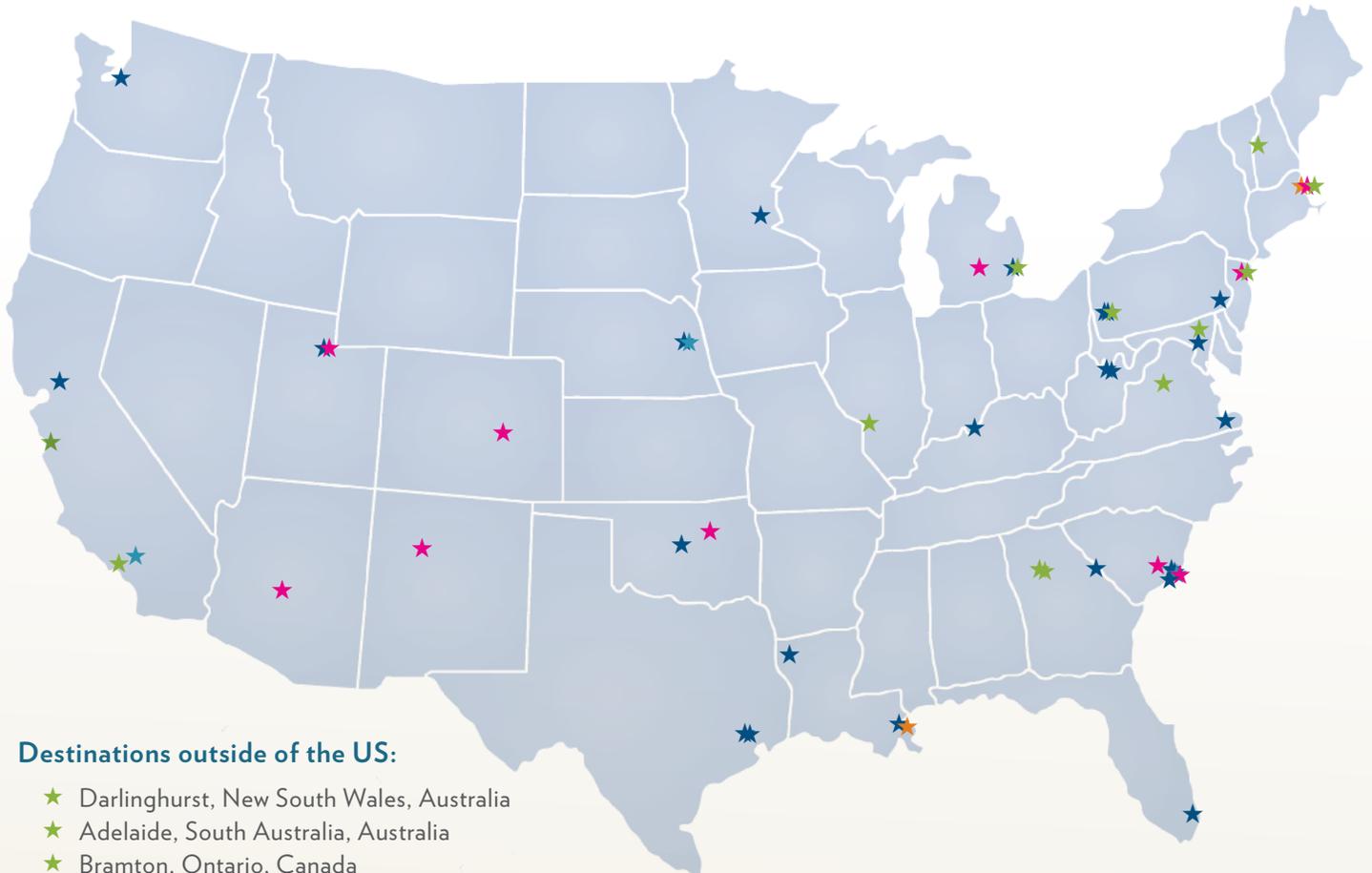
This one-year fellowship was established in 2010 under the direction of **David R. White, M.D.**, **William W. Carroll, M.D., MSCR**, **Clarice S. Clemmens, M.D.**, and **Phayvanh P. Pecha, M.D.** The fellowship provides a comprehensive experience in pediatric otolaryngology with a wide scope of training including complex pediatric airway, otology, head and neck, sinus, and craniofacial procedures. This is a transitional role from resident to faculty member. The pediatric otolaryngology fellow will act as a junior faculty member for routine patient management and procedures. Attending supervision is increased for complicated and advanced procedures, with increasing fellow responsibility as experience and technical skill level dictate. Fellows directly supervise and instruct all levels of residents in appropriate cases as described above in order to maximize resident education and hands on experience.

### Rhinology and Endoscopic Sinus/Skull Base Surgery

The Department has offered a one-year fellowship since 2006. Under the mentorship of **Rodney J. Schlosser, M.D.** and **Zachary M. Soler, M.D., MSc.** the program offers comprehensive training in all aspects of medical and surgical treatment of primary and revision inflammatory sinusitis, anterior and central skull base neoplasms, orbital and optic nerve pathology, and otolaryngic allergy, and prepares the fellow for practice as a tertiary rhinologist. Fellows have graduated responsibility, both in the OR and in clinic, with the opportunity for increasing independence throughout the year.

## Where are they now?

Many have continued on at academic hospitals across the US and internationally. We are extremely proud of each and every one!



### Destinations outside of the US:

- ★ Darlinghurst, New South Wales, Australia
- ★ Adelaide, South Australia, Australia
- ★ Bramton, Ontario, Canada
- ★ Kerala, India
- ★ Cork, Ireland
- ★ Dublin, Ireland

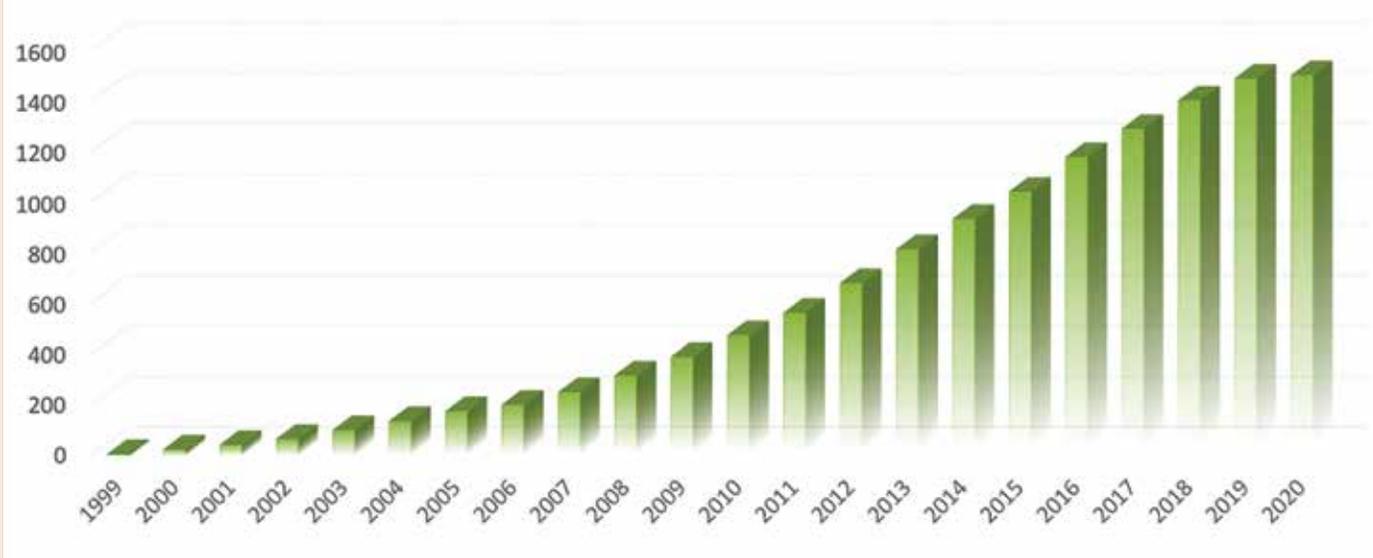
## 2020 Graduates

- ★ Jason D. Pou, M.D.: Oshner Clinic Foundation, New Orleans, LA
- ★ Mahmoud I. Awad, M.D.: MUSC Facial Plastic & Reconstructive Surgery Fellow, Charleston, SC
- ★ Peter M Horwich, M.D.: LSU Shreveport HN Fellow, Shreveport, LA
- ★ Yuan F. Liu, M.D.: Loma Linda University Health, Loma Linda, CA
- ★ Jaye Bea Downs, D.O.: Oklahoma State University Center for Health Sciences, Tulsa, OK
- ★ Ryan E. Little, M.D.: Dartmouth-Hitchcock School of Medicine, NH

# MUSC Cochlear Implant Program: 20 Years of Improving Communication and Quality of Life for Patients with Hearing Loss

Kara Leyzac, AuD, Ph.D, CCC-A

## Cummulative Patients Implanted at MUSC



Since June 1, 1999 we have implanted 1,506 ears: 1,043 adults, 463 children

In August 2020, the MUSC Cochlear Implant (CI) Program celebrated 20 years of providing excellent care to patients throughout the state of South Carolina and beyond. As a large medical center, we are able to offer our patients a multidisciplinary approach which includes collaborations with MUSC Developmental-Behavioral Pediatrics, Occupational Therapy, and Neuropsychology/Neuropsychiatry. Our program is the largest, most comprehensive CI program in the state of South Carolina, as we provide care for more than 1,500 patients. Moments like this represent an opportune time to not only reflect where we have been, but also present a chance to focus on the future goals of our CI Program. With the addition of new faculty and facilities, we anticipate significant growth in both our clinical and research programs in the coming years.

### Clinical Growth

As the number of patients receiving CIs at our program continues to grow, so has our team. Our experienced CI team is comprised of five audiologists, five surgeons and a certified auditory verbal therapist (AVT). With patients seeking CI care at MUSC from all parts of the state/region, we hope to expand the locations where CI care is available. A dedicated CI coordinator ensures that all visits are streamlined to increase efficiency for those patients who travel long distances. Finally, the addition of telehealth and virtual care have allowed the opportunity for surgeons to discuss the CI process and potential outcomes with patients who are unsure whether or not they want to undergo a formal CI evaluation.

Since MUSC is undergoing major expansion regarding pediatric services, we have identified pediatric cochlear implantation as a growth target. As such, we recently welcomed a new audiologist to our CI team, Kaylene A. King, AuD. Dr. King received her undergraduate degree at the University of Connecticut, and then went on to receive

her Doctorate in Audiology from the University of North Carolina at Chapel Hill. She completed her externship at The Children's Cochlear Implant Center at UNC, and brings to the team clinical and research experience in pediatric and adult CI recipients. In addition, more clinical effort has been afforded to adult cochlear implantation as we continue to see greater numbers of adult referrals each year. Together, we are dedicated to increasing CI utilization in South Carolina and in the Southeast region.



### Physicians

**Ted R. McRackan, M.D., MSCR**, Medical Director, Cochlear Implant Program

**Paul R. Lambert, M.D.**, Department Chair

**Ted A. Meyer, M.D., Ph.D.**, Director, Otology - Neurotology

**Habib G. Rizk, M.D., MSc**, Director, Vestibular Program

**David R. White, M.D.**, Director, Pediatric ENT, MUSC Health Children's Surgeon in Chief

### Audiologists

**Kara Leyzac, AuD, Ph.D.**, Director, Cochlear Implant Program

**Elizabeth Camposeo, AuD**, Assistant Director, Cochlear Implant Program

**Kaylene A. King, AuD**, Audiologist

**Kimberly A. Orr, AuD**, Director, Audiology

**Christine C. Strange, AuD**, Clinical Director, Vestibular Program

### Speech-Language Pathologist

**Nevitte Swink Morris, MSP, CCC-SLP, LSLs, Cert. AVT**  
Certified Auditory-Verbal Therapist

## Cochlear Implant Candidacy

Several of the patients that we see for CI evaluations were, most likely, candidates several years before they even stepped foot through our clinic doors. CI candidacy and criteria have significantly expanded in recent years. CIs were initially approved by the FDA for commercial use in 1984, and now have been implanted in over 500,000 patients worldwide. However, data suggests that only five to six percent of patients who could benefit from a CI receive one.<sup>1</sup> In their early existence, CIs were only reserved for patients with profound, bilateral hearing loss and zero percent speech

understanding with the use of traditional hearing aids.

Today, CI candidacy has expanded to include patients with significant low-frequency residual hearing as well as patients with completely normal hearing in the contralateral ear ('single-sided deafness'). Research shows CIs to be beneficial in these populations.<sup>2</sup>

Importantly, research from our center has demonstrated that word recognition scores obtained with headphones or inserts on routine clinical audiograms are a poor surrogate of how patients perform with their hearing aids.<sup>3</sup> This practice has been used for years and may be partially responsible for the low cochlear implant utilization numbers discussed above. However, more recent research from our center and others has shown that certain cut off scores from routine clinical audiograms may help identify CI candidates. **In general, patients who self-report poor hearing aid performance and have word recognition scores <60 percent and pure-tone averages >60dB are very likely to be cochlear implant candidates.**<sup>4</sup>

CI outcomes tend to be better in patients who receive a CI sooner rather than later. In younger pediatric patients, timing is crucial; there is a short critical period within the first few years of life during which neural plasticity is greatest and auditory development is possible.<sup>5</sup> Pediatric patients who are implanted within the first one to two years of life and regularly participate in AVT demonstrate outcomes comparable to their normal hearing peers.<sup>6,7</sup> In adult patients, better results may be observed in patients with a shorter duration of hearing loss prior to getting a CI, and who have a foundation of spoken language.<sup>8,9</sup> There is also some recent evidence that timely implantation in older patients might help to improve age-related cognitive decline.<sup>10</sup>

Continued on next page...

## Cochlear Implant Program...continued

Most importantly, however, identifying adult CI candidates at an earlier date decreases the duration of time when patients struggle with hearing aids and have poor communication with their family and social network. The MUSC CI program is committed to increasing our outreach efforts in the medical community and public to improve the timeliness of cochlear implantation in our region.

For these reasons, we encourage early referrals for potential CI candidates. More information and resources on CI candidacy and referrals can be found here: <https://www.acialliance.org/news/520922/When-Should-an-Adult-be-Referred-for-a-CI-Evaluation.htm>.

### What our patients are saying...

“THANK YOU!! You helped me survive the first leg of this new hearing journey...every day is a new experience, sometimes frightening. But you were always there for me as I went from practically total deafness to understanding sentences...You brought me from darkness to light , and for that, I will forever be grateful”.

“What a joy it is to know you. [We] look forward to our appointments with you and to the new things that we discover together. It is so easy to work with you. You are a great listener and a consummate professional...[you and Dr. Lambert] have given me my life back. It is so wonderful to hear the birds chirp, to understand conversations, to listen to music, to FaceTime with family and friends and to belong to the world of hearing again”

“I just wanted to thank you again for all of the great information you shared with us yesterday during my Mom’s CI appointment. It is obvious that you love what you do, and you are great! I wanted to let you know that we are very appreciative for your time, patience, and sharing of information to assist us along this journey.”

## Research Highlights

Over the last several years, we have made great strides to capitalize on the expertise of the scientists in the MUSC Hearing Research Program to expand research within the CI Research Program. This collaborative effort allows us to apply cutting edge methods to advance CI research. This includes, but is not limited to, advanced imaging analysis, electrophysiological expertise, longitudinal study design and data collection. Collectively, our group has published well over 200 peer-reviewed articles in the area of cochlear implantation, and we plan to greatly expand our research profile in areas that directly improve the care of our CI patients.

**Ted R. McRackan, M.D., MSCR** is funded by the National Institutes of Health for his research focusing on better understanding of CI outcomes through the application of alternative outcomes measures including quality of life instruments. **Kara Leyzac, AuD, Ph.D.** is involved in several collaborative projects with researchers at MUSC and at other institutions. Her work largely centers on better understanding how the health of the auditory nerve and aging affect performance in CI users. She recently presented on her research as a Keynote Speaker at the 2020 AG Bell Global Listening and Spoken Language Symposium, and was awarded the 2020 John R. Raymond Mentoring Fellowship which will provide collaborative training to examine cortical processing in CI patients.

**Kaylene A. King, AuD** actively participated in research projects during her time at UNC, and presented those findings at national conferences. In 2019, she was awarded the American Cochlear Implant (ACI) Alliance Student Scholarship to present her work examining bimodal benefit in pediatric cochlear implant recipients. In addition, there are multiple other clinical research projects by other faculty members currently under way.

## The Future of Our CI Program

**Kara Leyzac, AuD, Ph.D.:** “I was thrilled to join the CI team at MUSC for many reasons, but most evident was the tremendous opportunity for growth and outreach. For years, we have had a very strong, nationally recognized CI program at MUSC. But, we are also ideally situated to expand clinical care in order to reach a greater number of patients throughout the state and maximize outcomes by capitalizing on collaborations with expert researchers within the institution. We have big goals for our future, and we look forward to the challenge in order to better serve our patients.”

**Ted McRackan, M.D., MSCR:** “The MUSC CI program has not come close to reaching our full potential. Our long term goal is to be a nationwide leader for CI clinical care and research. On the clinical front, we have some of the best audiologists and CI surgeons in the country who are committed to ensuring that every patient performs to their full ability. In addition, our research is geared toward improving CI patient outcomes through precision medicine. This includes, but is not limited to personalizing CI programming, improving the measurement of individual patient benefit from cochlear implantation, and identifying patient factors that better predict cochlear implant benefit.”

### Why We Love Working with Our CI Patients

**David R. White, M.D.:** “I enjoy working with cochlear implants in children because of the impact that we have on a child’s ability to communicate. Most people don’t realize that a child born deaf will not learn spoken language unless the deafness is treated. It is always rewarding to see one of my patients who was implanted as a baby return to clinic as a four year-old chatterbox with perfect speech!”

**Elizabeth Camposeo, AuD:** “I have been fascinated with cochlear implants since I started college and first saw the incredible magnitude of improvement in CI patients. I have seen individuals who cannot hear or understand anyone who then progress to being able to communicate with ease and even talk on the phone. The isolation caused by the inability to communicate, or communicate without great effort, has

a profound impact on people. I consider myself very lucky to be able to reconnect people with their family and friends through an improved ability to communicate. □

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**Kara Leyzac, AuD, Ph.D., CCC-A** is the director of the Cochlear Implant Program at MUSC. She grew up in northeastern Ohio, and received her undergraduate degree in Hearing, Speech and Language Sciences from Ohio University, and then went on to complete both her Doctorate of Audiology and Doctorate of Philosophy in Audiology at the University of Maryland, College Park in 2010. She completed her externship at the National Center for Rehabilitative Auditory Research in Portland, Oregon. Her dissertation focused on interactions between aging and cochlear implants in adults. Prior

to joining MUSC in January 2020, she was a faculty member at the University of Michigan and the Kresge Hearing Research Institute, and was a member of the University of Michigan Cochlear Implant Team.

She currently participates in the clinical care of pediatric and adult cochlear implant patients, and is involved in several extramurally funded cochlear implant research projects with both internal and external collaborators. Dr. Leyzac has participated as an invited speaker at several national and international cochlear implant conferences, and most of her recent research efforts have focused on better understanding the relationship between auditory nerve health and cochlear implant outcomes.

# Unraveling the Mysteries of Multidisciplinary Clinics

Krishna G. Patel, M.D., Ph.D.

One of the greatest honors of being part of a department within a tertiary care academic hospital is participating within multidisciplinary clinics.

**Chris M. Discolo, M.D., MSCR** (pediatric otolaryngology) served as medical director of the Medical University of South Carolina Craniofacial Cleft Palate Team for over a decade and now **Krishna G. Patel, M.D., Ph.D.** (facial plastic and reconstructive surgery) has stepped into this role. With the recent opening of the MUSC Health Shawn Jenkins Children's Hospital in March 2020, the chance to enhance and further grow the reaches of the craniofacial and cleft team was possible. This team has been nationally accredited by the overseeing American Cleft Palate Craniofacial Association (ACPA) for over a decade and is one of two in the state. The team is made up of several subspecialties that gather twice a month to see patients in a single clinic including: Audiology, Genetics, Oral Maxillofacial Surgery, Orthodontics, Otolaryngology - Head and Neck Surgery, Pediatric Dentistry, Plastic Surgery, Social Work, and Speech-Language Pathology. Additional services are also made available to the patients when warranted including some of the more frequent referrals to: Developmental Pediatrics, Pediatric Ophthalmology, Pediatric Orthopedics, Psychology, and Pediatric Neurosurgery.

The concept of establishing a single clinic site for patients to see all the subspecialists is the foundation of what multidisciplinary teams are based upon. The ACPA recommended delivering multidisciplinary care to children born with craniofacial or cleft diagnosis to ease the burden of care on the families. Thus, the goal is to lessen the frequency that families have to travel to the variety of physician appointments that can be both costly and time consuming. Additionally, having all the subspecialties in one setting allows for better in-group discussions about treatment plans and a more cohesive delivery of that care. While conceptually this makes sense, knowing the efficacy has been rarely investigated.

The MUSC craniofacial cleft palate team wanted to look at how well the team was achieving the goal of multidisciplinary care. A retrospective analysis of the clinic over the last five years was performed looking at attendance of the subspecialists, as well as the patients. Findings confirmed that from 2016-to 2020, at least once a month, seven of the above-mentioned specialties were present to provide care as a team. Looking at the same time period, there were 589 patients actively being seen within the craniofacial clinic. During that time period, and omitting the new patients who

**Krishna G. Patel, M.D., Ph.D.**, joined the Department of Otolaryngology – Head and Neck Surgery in August 2008. She is a native of Athens, Georgia and attended Columbia University in New York City for her undergraduate education. She then earned M.D. and Ph.D. degrees through the combined program at the Medical College of Georgia, where she was awarded the Excellence in Research Award. Dr. Patel completed a residency in otolaryngology – head and neck surgery at the University of North Carolina in Chapel Hill. Following residency, she pursued fellowship training in facial plastic and reconstructive surgery at the University of California, Davis.

During both her residency and fellowship training, Dr. Patel participated in volunteer medical trips to third world countries to provide care to the medically underserved. Her recent trips to Ecuador and El Salvador involved surgically repairing children with cleft lips, cleft palates and ear deformities. She is board certified by the American Board of Otolaryngology and by the American Board of Facial Plastic and Reconstructive Surgery.

As a member of the MUSC faculty, Dr. Patel's focus is in the areas of aesthetic facial plastic surgery, such as rhinoplasties, Botox and blepharoplasties. Her practice also includes facial reconstructive surgery, facial trauma surgery, and reconstruction of Mohs defects. She is a member of the Craniofacial Anomalies and Cleft Palate Center and participates in the repair of cleft lips and palates.



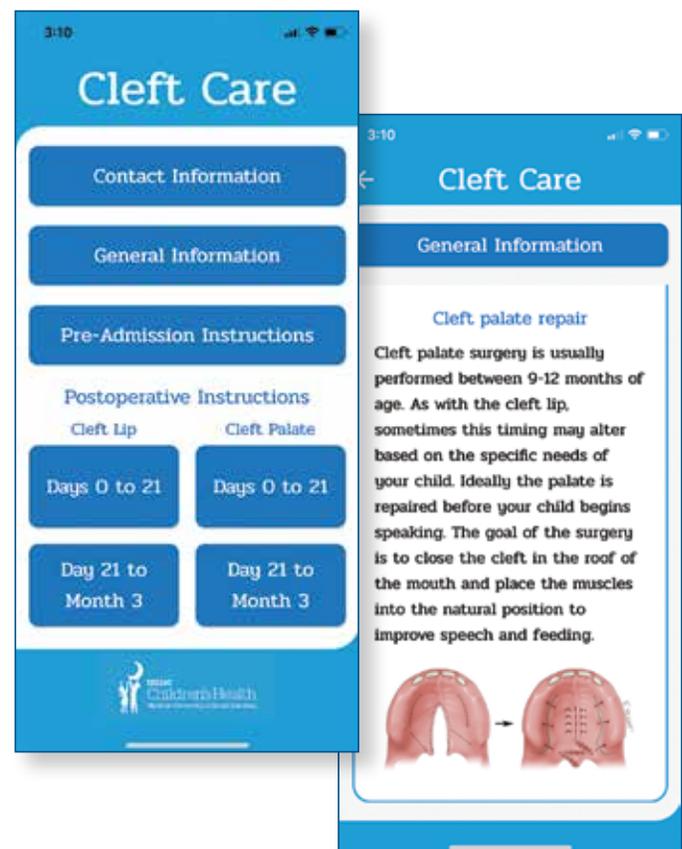


Beau Runia underwent a repair of his cleft lip and palate. Mom kindly sends photos of his annual visits.

had been seen for the first time last year (92 patients), **83.5 percent of the patients returned for annual follow ups.** Thus, 16.4 percent did not return for follow up and were only seen once. This already excluded the population of patients that had moved away, did not require further follow up, or were deceased. Interestingly, distance was not a factor that played into whether a patient would return to clinic. This potentially shows that patients appreciate the high-level care they receive and are willing to travel.

While 83.5 percent confirms that the team is doing a good job bringing patients back to clinic, it has room for improvement. Additionally, there was a variance of continued follow up ranging from two to five return visits over the five years. For this reason, the team is continuing to better understand what barriers cause patients to stop attending the multidisciplinary clinics. The next step in this initiative is to involve the patients and families to understand what motivates patients to attend multidisciplinary care (such as seeing many specialists at once) and what does not work (long all-day visits). Additional projects of using smart phones/devices to provide educational information is being incorporated. A smart phone app called “Cleft Care” was created by **Eric Barbarite, M.D.** (Mass Eye and Ear) with the guidance of **Krishna Patel, M.D., Ph.D.** and **Linda Lee, M.D.** (Mass Eye and Ear) to offer parents postoperative instructions after cleft lip and palate surgery.

While multidisciplinary teams are now commonplace in the delivery of health care, rarely have we critically analyzed if this is working. Our initial data suggest that it is! □



# Using Endotypes and Phenotypes to Personalize Treatment for Nasal Polyposis

Rodney J. Schlosser, M.D.

Chronic rhinosinusitis with nasal polyps (CRSwNP) has traditionally been one of the most challenging conditions treated by ENT surgeons. Traditional treatment with polypectomies and endoscopic sinus surgery (ESS) with nasal steroid sprays often resulted in recurrent polyposis and repeated operations. ENTs have always known that certain phenotypes, such as aspirin exacerbated respiratory disease (AERD) and allergic fungal rhinosinusitis (AFRS), have a worse prognosis. However, significant changes in our management strategy occurred roughly a decade ago with the widespread use of steroid rinses. Steroids are known to be effective in eosinophilic, type 2 inflammatory polyps, it was simply a matter of achieving effective delivery throughout the sinus cavity – something that was lacking with limited surgery and simple sprays. The concept of more effective delivery methods with large volume rinses was coupled with surgery designed to improve delivery and this often includes a modified Lothrop.

In an effort to better understand the impact of this changing strategy, we have conducted several studies investigating ESS outcomes. Meta-analysis found that on average, CRSwNP patients can expect an improvement in SinoNasal Outcomes Test-22 (SNOT22) of around 23 points, regardless of phenotype.<sup>1</sup> We also found that CRSwNP can expect a revision rate of around 18 percent, however for AERD and AFRS phenotypes, this revision rate is significantly greater at approximately 28 percent. Other risk factors associated with higher revision rates included asthma (22 percent vs 8 percent) and prior ESS (26 percent vs 14 percent).<sup>2</sup> Interestingly, revision rates decreased by about 1/3 after 2008. In order to better understand specific factors that may have impacted this improved revision rate, we followed 338 CRSwNP patients who had ESS at MUSC over the last 18 years.<sup>3</sup> In the last decade, our Lothrop rates increased from one percent to 22 percent of all CRSwNP cases. In high risk phenotypes of AERD and AFRS, our revision ESS rates have been cut nearly in half. It is difficult to separate the impact of this more aggressive surgery from use of steroid rinses, as these strategies were implemented hand-in-hand, however, the improved outcomes are encouraging. The **figure above** demonstrates a patient with AERD three years after Lothrop and steroid rinses with no systemic steroid use. Other groups have shown that with postoperative aspirin desensitization in AERD



patients, revision ESS rates can be decreased to nine percent.<sup>4</sup>

Just as important as changing our approach to these high risk phenotypes to improve outcomes, is our understanding of outcomes in patients who do not have high risk AERD or AFRS and thus have favorable phenotypes. In both meta analyses and our MUSC cohort, these patients seem to have revision rates around 13 percent, regardless of performance of Lothrop or compliance with steroid rinses. Thus more aggressive surgery and steroid delivery methods may not be routinely needed in this group and a more conservative approach seems reasonable.

In addition to personalizing surgical and postoperative topical therapies based upon CRSwNP phenotype, the introduction of biologics for CRSwNP has ushered in an era where ENTs must also understand the endotype of their patients. Dupilumab is an IL4/IL13 receptor antagonist and was the first biologic approved for use in CRSwNP patients. Published results are impressive, as mean SNOT22 improvements in the overall cohort are approximately 20 points and nasal polyp scores improve an average of nearly two points.<sup>5</sup> However, close examination of these results with a focus upon personalized medicine demonstrates that there appear to be responders and non-responders. In order to enter the study, patients had to have significant polyp burden with NP scores of at least five, indicating polyps to the inferior border of the inferior turbinate on one side and out of the middle meatus on the contralateral side. Between

35 and 38 percent of patients in these studies had no demonstrable change in endoscopic NP score with another 15 percent only improving by one point on the NP score. Only about half of patients improved by two points or more. Thus roughly 50 percent of patients appear to have fairly dramatic responses, while others remain unchanged or have minimal improvement.

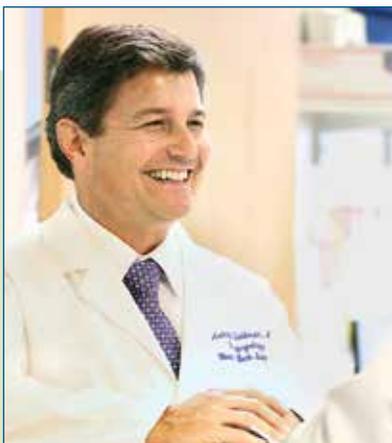
In order to gain insight into patient endotype in an atraumatic fashion, our research group has been using methods to collect mucus from specific locations in the sinonasal cavity and measure cytokine levels in this mucus. In a multi-institutional study funded by the NIH, our group has found that IL13 levels are elevated in the mucus of almost 60 percent of CRSwNP patients when compared to healthy control patients (data not yet published). Whether these elevated cytokine levels correlate with biologic outcomes remains to be determined. Interestingly, IL13 levels are also elevated in 15 percent of CRSsNP patients who may have an eosinophilic, type 2 endotype, but have not yet developed polyps that are visible endoscopically. Varying results are also noted for other mucus biomarkers, including IL5 and IgE, both of which are expected to have biologics approved for use in the near future.

The landscape for treating CRSwNP has changed greatly over the last decade. Improved outcomes with tailored surgery, delivery of topical medications, drug eluting stents and greater understanding of biomarkers which may predict

response to biologic therapies will undoubtedly continue to evolve rapidly over the next several years. Patients will certainly benefit as we develop personalized treatments that encompass an understanding of the risks, benefits, costs and expected response rates for all treatment options for our individual patients. □

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**Rodney J. Schlosser, M.D.** is the director of rhinology and sinus surgery at the nose and sinus center. After graduating from the U.S. Military Academy at West Point and serving four years of active military duty in the U.S. Army, Dr. Schlosser received his medical degree from the Mayo Clinic. He then completed his ENT residency at the University of Virginia where he trained under the mentorship of Charles W. Gross, M.D., a nationally recognized sinus surgeon and pediatric otolaryngologist. After his residency, Dr. Schlosser completed an additional year of study during a fellowship devoted exclusively to the treatment of advanced sinus disease at the University of Pennsylvania with David W. Kennedy, M.D., one of the premiere sinus surgeons in the world.

Dr. Schlosser has written a textbook on the management of sinus problems and more than 200 articles and chapters dealing with sinus and nasal topics. He regularly travels around the world to speak and teach courses on the latest techniques in endoscopic sinus surgery and computerized image-guided surgery. Dr. Schlosser focuses primarily on difficult adult and pediatric sinus cases, nasal obstruction, revision surgeries, sinonasal tumors, encephaloceles/cerebrospinal fluid leaks, severe nasal polyposis, smell and taste disorders, and congenital nasal disorders.

# Update on the Department's NIDCD-supported T32 Research Training Program

Judy R. Dubno, Ph.D.

**W**e are proud to announce the five-year renewal of our NIDCD-supported (National Institute on Deafness and Other Communication Disorders) T32 research training program **Interdisciplinary Research Training in Otolaryngology and Communication Sciences**.

There is a current and growing need for well-trained basic, translational, and physician scientists to conduct research in otolaryngology and communication health, and launch and sustain independent research careers. The NIDCD Strategic Plan for 2017-2021 highlighted these needs, as follows: “The field of human communication sciences needs interdisciplinary research teams of clinicians and basic scientists to bridge the gap between laboratory research and patient care...The NIDCD believes that cross training these scientists could spark new ways to better prevent, detect, and treat communication and chemosensory disorders. Interdisciplinary teams of basic scientists and clinicians—including physicians, surgeons, and audiologists—will then be able to initiate and support new directions for scientific discovery, conduct hypothesis-driven clinical trials, assess new diagnostic tools and interventions, and improve public health and well-being.” Our training program’s mission is to address these needs by supporting mentored research opportunities in the disciplines related to otolaryngology

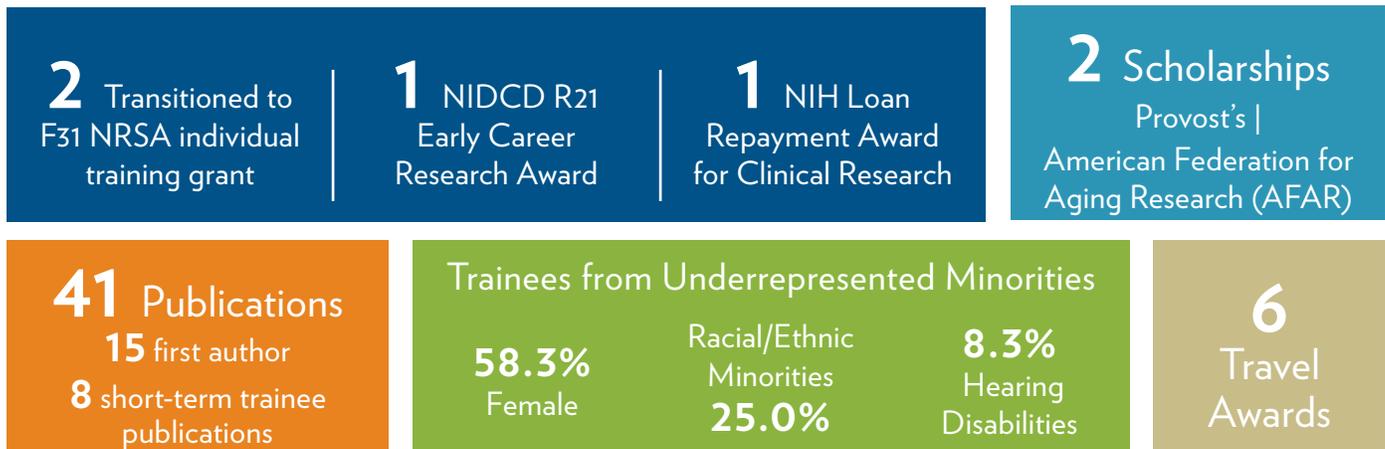
and communication health, providing strong curricula and research experiences in an integrative framework, with an interdisciplinary research culture that emphasizes mentoring, academic advancement, career development, grantsmanship, diversity outreach, responsible and ethical conduct of research, and productivity.

The major components of our multifaceted program are:

1. Predoctoral research training leading to the Ph.D. degree in Biomedical Sciences or Health and Rehabilitation Science, with applications to otolaryngology/communication health.
2. Predoctoral research training for medical students.
3. Short-term research training opportunities for health professional students with interests in otolaryngology and communication disorders (medical, dental, pharmacy, nursing, audiology, speech-language pathology, and other health professional students).
4. Postdoctoral research training for M.D. physician-scientists and Ph.D. scientists in basic, translational, and/or clinical sciences related to otolaryngology and communication health.

**Judy R. Dubno, Ph.D.** is a Professor and Director of the Hearing Research Program in the Department of Otolaryngology–Head and Neck Surgery. Her research on human auditory function has been supported by grants from the National Institutes of Health (NIH)/ National Institute on Deafness and Other Communication Disorders (NIDCD) since 1981. Dr. Dubno also directs a T32 Institutional Training Grant from NIH/NIDCD. She previously served on the NIH/NIDCD Advisory Council; on National Academies of Sciences, Engineering, and Medicine consensus committees; and as President of the Association for Research in Otolaryngology (ARO) and the Acoustical Society of America (ASA). Dr. Dubno’s current activities include serving as ASA’s Treasurer, and on the Boards of the American Institute of Physics and the Hearing Health Foundation. She is a Fellow of ASA and the American Speech-Language-Hearing Association (ASHA), and received ASHA’s Honors of the Association, the 2018 South Carolina Governor’s Award for Excellence in Science, and ASA’s Gold Medal in 2020.





**Figure 1. Summary of accomplishments of T32 trainees**

Each of these components is supported by an outstanding group of experienced mentors who direct active, funded research programs; opportunities for interdisciplinary research collaboration and specialized training; and an exceptional institutional infrastructure provided by multiple departments, colleges, and universities.

Although the program just completed its fifth year, significant accomplishments have been achieved, including:

1. All training positions were filled throughout the funding period by recruiting outstanding predoctoral students, postdoctoral fellows, and health professional students.
2. Trainees include significant numbers of underrepresented minority students and fellows, and trainees with disabilities – of 24 trainees, 14 are female (58.3 percent), six are from underrepresented racial/ethnic minorities (25.0 percent), and two have hearing disabilities (8.3 percent). (**Figure 1**)
3. Trainees authored or co-authored 57 publications in peer-reviewed journals with 18 (31.6 percent) as first author.
4. Two predoctoral trainees successfully transitioned from the T32 to F31 NRSA individual training grants.
5. Two postdoctoral and two predoctoral trainees completed training and all four have transitioned to research career tracks in academic positions as Assistant Professors; one predoctoral trainee completed a postdoctoral fellowship before her faculty appointment.

6. Following training, one postdoctoral trainee received an NIDCD R21 Early Career Research Award.
7. During training, one postdoctoral trainee received an NIH Loan Repayment Award for Clinical Research.
8. Two trainees received scholarships in recognition of their research.
9. All trainees attended local, national, or international scientific meetings where they presented their research and received six travel grants and other awards.
10. Trainees received multiple first and second place awards for their presentations at MUSC Research Day.
11. The program added eight Core Mentors (total=17) and all 10 Emerging Mentors are new appointees.

We look forward to continuing the Department's successful training program and supporting outstanding predoctoral and postdoctoral trainees in all areas related to otolaryngology and human communication sciences. □



## Farewell Residents & Fellows

### 2020 Resident Graduates



Patrick F. Morgan, M.D. Alex W. Murphey, M.D. Florence A. Othieno, M.D. Robert J. Taylor, M.D. Mitchell L. Worley, M.D.

**Patrick F. Morgan, M.D.** leaves us to pursue fellowship training in Head & Neck Oncologic and Microvascular Reconstructive Surgery at the University of Miami. Dr. Morgan was most well-known for his love of the Clemson Tiger football program and his generosity in sharing his cooking. His mastery of Chicken Parm with sauce from a jar was legendary. He also developed into a tremendous surgeon and teacher. He published six papers during residency. Dr. Morgan received an AAO-HNS CORE grant for head and neck cancer research, and several research awards. He was also named the MUSC Head & Neck Resident of the Year 2019. Despite the COVID pandemic, he and Lauren exchanged vows this spring. We wish Dr. Morgan and his wife Lauren the best of luck in Miami.

**Alex W. Murphey, M.D.** is now with the Alaska Native Medical Center in Anchorage, Alaska as a general otolaryngologist. Dr. Murphey was known for his love of the Georgia Bulldogs, travel, modeling, and to only a slightly lesser extent, playing golf, where he excels. The photographic documentation of Dr. Murphey's exploits reaches the sublime. Alex's surgical skills and calm leadership propelled him through the residency program. He published eight papers as an MUSC resident. We wish Dr. Murphey and his wife, Katherine all the best in Alaska.

**Florence A. Othieno, M.D.** leaves us for fellowship training in Plastic and Reconstructive Surgery at SUNY Upstate medical center in Syracuse, New York with Dr. Tatum. Dr. Othieno was known for her leadership, patient care, and calm demeanor. She received many accolades about her mentoring and

teaching skills from our medical students and residents. Dr. Othieno took on additional leadership roles during residency through her participation in several MUSC committees. As an MUSC resident, she also published five papers. We wish Dr. Othieno great success in New York.

**Robert J. Taylor, M.D.** is now with Mount St. Mary's Hospital Ear, Nose, & Throat Services in Niagra Falls, New York as a general otolaryngologist. Dr. Taylor was known for his attention to detail, preparation, and dogged determination to succeed. He published three papers as an MUSC resident, and has approximately a dozen manuscripts in total. Dr. Taylor received an AAO-HNS Core training grant for rhinology research. He received second place for his resident research presentation at the 2017 Charleston Magnolia Conference. We wish Dr. Taylor, his wife Valerie, and their children all the best in New York.

**Mitchell L. Worley, M.D.** leaves us to join Spartanburg and Greer ENT and Allergy in Spartanburg, South Carolina as a general otolaryngologist. Dr. Worley was known for his surgical skills, dedication, teaching, and tremendous academic accomplishments. He was consistently at or near the top nationally on the Otolaryngology Residency yearly in-service examination. He published at least 12 papers as an MUSC resident. Dr. Worley received an MUSC Resident Teaching Award in 2019 and first place for his resident research presentation at the 2019 Charleston Magnolia Conference. We wish Dr. Worley and his wife, Alyse all the best in Spartanburg.



The residents honored **Lucinda A. Halstead, M.D.** with the annual Resident Teaching Award. It is recognition for an individual who spends hours with residents in the lecture room, cadaver lab, and operating theater to make sure they leave MUSC with excellent training and skills.

## 2020 Fellow Graduates

in Facial Plastic and Reconstructive Surgery, Head & Neck Oncology and Microvascular Reconstructive Surgery, Neurotology, Complex Pediatric Otolaryngology, and Rhinology and Endoscopic Sinus/Skull Base Surgery,

**Mahmoud I. Awad, M.D.** completed the 2019-2020 Head & Neck Oncology and Microvascular Reconstructive Surgery fellowship, and will continue at MUSC to undergo a Facial Plastic & Reconstructive Surgery fellowship. We are thrilled to watch Dr. Awad grow his skills in another specialty while we continue to support his insatiable sweet tooth.

**Jaye Bea Downs, DO** completed the 2019-2020 Pediatric Otolaryngology fellowship, becoming our tenth pediatric otolaryngology fellow and the first to serve at MUSC Shawn Jenkins Children's Hospital. She will be moving back to Tulsa, Oklahoma, where she will serve as faculty in her home residency program at Oklahoma State.

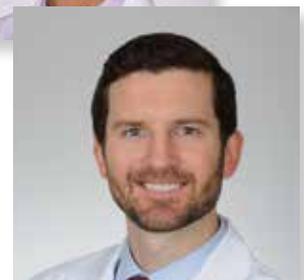
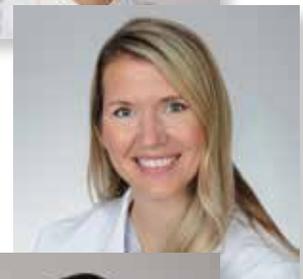
**Peter Horwich, M.D.** completed the 2019-2020 Head & Neck Oncology and Microvascular Reconstructive Surgery fellowship, and continues as a HN Fellow at LSU Shreveport, Shreveport, LA. During his fellowship, Dr. Horwich was a wonderful teacher and a joy to work with. The OR will miss his colorful personality.

**Ryan E. Little, M.D.** completed his Fellowship in Rhinology and Endoscopic Skull Base Surgery. He and his wife, Brittany, will join the faculty at the Dartmouth-Hitchcock School of Medicine. During his fellowship, Dr. Little completed research projects on impact of chronic rhinosinusitis upon sleep and a multi-institutional study validating the Sinus Control Test. Best wishes to Ryan, Brittany and their dogs!

**Yuan F. Liu, M.D.** came to MUSC from Loma Linda University and completed the 2018-2020 fellowship in Neurotology. He was very busy academically with nearly 20 papers and chapters published during fellowship. He is Co-Investigator on a grant from the American Hearing Research Foundation with Habib G. Rizk, M.D. Dr. Liu was loved by our students, residents, staff, and patients for his caring nature and teaching abilities. Although his musical choices were often suspect, his surgical skills were outstanding. Dr. Liu and his wife, Jenny are returning to Loma Linda, California where Dr. Liu will begin his academic career at the University of Loma Linda. We wish them tremendous success.

**Jason D. Pou, M.D.** completed his Facial Plastic & Reconstructive Surgery fellowship at MUSC and joined Ochsner Clinic Foundation in New Orleans. He has the unique background training of a superb cosmetic fellowship under Dr. DeJoseph in Atlanta, Georgia and a reconstructive-centric fellowship at MUSC. Thus, his breadth of practice will embody the full composition of facial plastic and reconstructive surgery.

He is an attending physician at Ochsner and works with residents in the Tulane Otolaryngology - Head and Neck Surgery program. There he is developing a cosmetic and reconstructive practice with special interest in facial reanimation.



# Otolaryngology - Head & Neck Surgery Providers

## Otology & Neurotology



**Paul R. Lambert, M.D.**  
 Professor and Chairman  
 M.D.: Duke University  
 Residency: UCLA  
 Fellowship: House Ear Institute



**Ted A. Meyer, M.D., Ph.D.**  
 Professor, Director, Otology - Neurotology  
 M.D. & Ph.D: University of Illinois  
 Residency: Indiana University  
 Fellowship: University of Iowa



**Theodore R. McRackan, M.D., MSCR**  
 Associate Professor, Director, Cochlear Implant Program,  
 Director, Skull Base Surgery Center  
 M.D.: MUSC  
 Residency: Vanderbilt University Medical Center  
 Fellowship: House Ear Institute



**Habib G. Rizk, M.D., MSc**  
 Associate Professor, Director, Vestibular Program  
 M.D.: Saint Joseph University, Beirut, Lebanon  
 Residency: Saint Joseph Univ.and Hotel-Dieu de France Hospital,  
 Beirut, Lebanon  
 Fellowship: MUSC



**Mary Ann Howerton, PA-C**  
 Physician Assistant  
 MSPAS: MUSC



**Ryan S. Marovich, MPAS, PA-C**  
 Physician Assistant  
 MPAS: Gannon University

## Head & Neck Oncology



**Terry A. Day, M.D.**  
 Professor and Director, MUSC HN Tumor Program  
 Wendy and Keith Wellin Chair in Head & Neck Surgery  
 M.D.: University of Oklahoma  
 Residency: LSU-Shreveport  
 Fellowship: UC Davis



**Evan M. Graboyes, M.D., MPH, FACS**  
 Assistant Professor  
 M.D. & Residency: Washington University School of Medicine  
 Fellowship: MUSC



**Joshua D. Hornig, M.D.**  
 Associate Professor  
 Director, Microvascular Surgery and  
 Functional Outcomes  
 M.D. & Residency: University of Alberta  
 Fellowship: MUSC



**Eric J. Lentsch, M.D., FACS**  
 Professor  
 M.D. & Residency: University of Louisville  
 Fellowship: MD Anderson



**David M. Neskey, M.D., MSCR, FACS**  
 Associate Professor  
 M.D.: Albany Medical College  
 Residency: University of Miami  
 Fellowship: MD Anderson



**Hannah Feltner, PA-C**  
 Certified Physician Assistant  
 MPAS: Augusta University College of Allied  
 Health Sciences



**Sara F. Jasper, ACNP-BC**  
 Acute Care Nurse Practitioner  
 MSN: Columbia University



**Melissa A. Lee, PA-C**  
 Physician Assistant  
 MPAS: University of Texas Medical Branch



**Caitlin L. Mengler, RN, ACNP-BC**  
 Acute Care Nurse Practitioner  
 MSN: New York University

## Rhinology & Sinus Surgery



**Rodney J. Schlosser, M.D.**  
 Professor and Director,  
 Rhinology and Sinus Surgery  
 M.D.: Mayo Clinic  
 Residency: University of Virginia  
 Fellowship: University of Pennsylvania



**Zachary M. Soler, M.D., MSc**  
 Associate Professor  
 M.D.: Wake Forest University  
 Residency: Oregon Health and Science University  
 Fellowship: Harvard Medical School



**TK Wall, DNP, NP-C**  
 Family Nurse Practitioner  
 DNP: MUSC

## Evelyn Trammell Institute for Voice and Swallowing



**Lucinda A. Halstead, M.D.**  
 Associate Professor  
 Medical Director, ETIVS  
 M.D.: George Washington University  
 Residency: New England Medical Center, Boston



**Ashli K. O'Rourke, M.D.**  
 Associate Professor  
 M.D.: Medical College of Georgia  
 Residency: University of Virginia  
 Fellowship: Medical College of Georgia



**Drasti P. Smyre MSPAS, PA-C**  
 Certified Physician Assistant  
 MSPAS.: MUSC

## Facial Plastic & Reconstructive Surgery



**Krishna G. Patel, M.D., Ph.D.**  
 Professor, Director, FPRS  
 M.D. & Ph.D.: Medical College of Georgia  
 Residency: UNC Chapel Hill  
 Fellowship: UC Davis



**David S. Chen, M.D.**  
 Instructor  
 M.D.: Johns Hopkins University School of Medicine  
 Residency: Johns Hopkins University School of Medicine  
 Fellowship: Oregon Health & Science University



**Judith M. Skoner, M.D.**  
 Assistant Professor  
 M.D.: University of South Carolina  
 Residency: MUSC  
 Fellowship: Oregon Health and Science University



**Emily Kueser, MSPAS, PA-C**  
 Physician Assistant  
 MSPAS: MUSC

## Maxillofacial Prosthodontics



**Betsy K. Davis, D.M.D., MS**  
 Professor, Medical Director, Maxillofacial  
 Prosthodontics  
 D.M.D.: MUSC  
 Residency: University of Iowa  
 Fellowship: M.D. Anderson; UCLA



**J Rhet Tucker, D.M.D.**  
 Assistant Professor  
 D.M.D.: University of Pennsylvania  
 Residency: U.S. Army  
 Fellowship: MD Anderson

# Otolaryngology - Head & Neck Surgery Providers

## Pediatric Otolaryngology

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**David R. White, M.D.**  
Professor and Director, Pediatric Otolaryngology  
MUSC Children's Health Surgeon in Chief  
M.D.: MUSC, Residency: UNC Chapel Hill  
Fellowship: Cincinnati Children's



**William W. Carroll, M.D.**  
Assistant Professor  
M.D.: MUSC  
Residency: MUSC  
Fellowship: University of Minnesota



**Clarice S. Clemmens, M.D.**  
Assistant Professor, Pediatric Otolaryngology  
Fellowship Director  
M.D.: MUSC  
Residency: Hospital of the University of Pennsylvania  
Fellowship: Children's Hospital of Philadelphia



**Phayvanh P. Pecha, M.D.**  
Assistant Professor  
M.D.: University of Minnesota  
Residency: University of Utah  
Fellowship: MUSC



**Helen F. Kulseth, PA-C**  
Pediatric Physician Assistant  
MSPA: MUSC



**Lydia B. Redden, CPNP-AC**  
Acute Care Pediatric Nurse Practitioner  
MSN: University of South Alabama



**Jana L. Wheeler, PPCNP-BC**  
Pediatric Nurse Practitioner  
MSN: Yale University  
DNP: MUSC

## General Otolaryngology & Allergy

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**Mark J. Hoy, M.D.**  
Assistant Professor  
Director, General Otolaryngology & Allergy  
M.D.: Temple University  
Residency: University of Louisville



**Robert C. Waters, M.D.**  
Clinical Assistant Professor  
M.D.: MUSC  
Residency: Washington University in St. Louis



**Kiely M. St. Germain, FNP-C, MSN**  
Family Nurse Practitioner  
MSN: University of Maine School of Nursing

## Clinical Trials

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**Shaun A. Nguyen, M.D., FAPCR**  
Professor and Director,  
Clinical Research  
M.D. & Residency: University College London  
Fellowship: MUSC

## Audiology



**Kimberly A. Orr, AuD, CCC-A**  
 Director, Audiology  
 MA: Ohio State University  
 AuD: A.T. Still University



**Kara Leyzac AuD, PhD, CCC-A**  
 Director, CI Program  
 Assistant Professor  
 AuD & Ph.D.: University of Maryland



**Arielle Abrams, AuD**  
 Clinical Instructor  
 AuD: University of North Carolina in Chapel Hill



**Hannah R. Burrick, AuD, CCC-A**  
 Clinical Instructor  
 AuD: Washington University in St. Louis



**Elizabeth Camposeo, AuD, CCC-A**  
 Assistant Director, CI Program  
 Clinical Assistant Professor  
 AuD: Northwestern University



**Lauren L. Costello, AuD, CCC-A**  
 Clinical Instructor  
 AuD: Northeast Ohio AuD Consortium  
 (University of Akron)



**Meredith L. Duffy, AuD, CCC-A**  
 Clinical Director of Hearing Rehabilitation  
 AuD: University of Connecticut School of Medicine



**Kaylene A King, AuD**  
 Clinical Instructor  
 AuD: University of North Carolina at Chapel Hill



**Claire Hauschildt, AuD, CCC-A**  
 Clinical Instructor  
 AuD: Purdue University



**Elizabeth A. Poth, AuD, CCC-A**  
 Clinical Instructor  
 MS: UNC Chapel Hill  
 AuD: A.T. Still University



**Nicole Ritter, AuD, CCC-A**  
 Clinical Instructor  
 AuD: Ohio University



**Michelle L. Sewell, AuD, CCC-A**  
 Clinical Instructor  
 AuD: UNC Chapel Hill



**Christine C. Strange, AuD, CCC-A**  
 Clinical Instructor  
 Clinical Director, Vestibular Program  
 MA: SUNY Plattsburgh  
 AuD: A.T. Still University

# Otolaryngology - Head & Neck Surgery Research Faculty

## Hearing Research



**Judy R. Dubno, Ph.D.**  
Professor, Director, MUSC Hearing Research Program  
Ph.D.: City University of New York



**Jayne B. Ahlstrom, M.S.**  
Instructor  
M.S.: Vanderbilt University



**Mark A. Eckert, Ph.D.**  
Professor  
Ph.D.: University of Florida



**Kenneth I. Vaden, Jr., Ph.D.**  
Research Assistant Professor  
Ph.D.: University of California, Irvine



**Kelly C. Harris, Ph.D.**  
Associate Professor  
Ph.D.: University at Buffalo



**Lois J. Matthews, M.S.**  
Instructor  
M.S.: Purdue University



**Richard A. Schmiedt, Ph.D.**  
Professor Emeritus  
Ph.D.: Syracuse University

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Director of Development  
harrinbe@musc.edu, 843-792-3937



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# Welcome to MUSC!

**PGY-2 Residents** - The Department welcomed four new PGY2s into service in July 2020.



**Joshua E. Fabie, M.D.**, from York, PA, graduated magna cum laude from York College of Pennsylvania with a BS in Biological Sciences. He then attended Georgetown University for medical school where he was inducted into the Alpha Omega Alpha Honor Society. He received the MUSC Otolaryngology Research Fellowship, conducted Neurotology research for a year, and authored several papers on cochlear implantation and sialendoscopy. In his free time, he enjoys mechanical work, cycling, and tennis.



**Leo D. Gonzalez-Parrilla, M.D.**, was born and raised in Trujillo Alto, Puerto Rico. He received his BS in Molecular Biology from Universidad de Puerto Rico and graduated summa cum laude. He then attended Escuela de Medicina de la Universidad de Puerto Rico where he was inducted into the Alpha Omega Alpha and Gold Humanism Societies. In his free time he enjoys playing the drums, salsa dancing, opera singing, traveling, fútbol, and enjoying life.



**Brendan M. Hardy, M.D.**, is from Chicago, IL and graduated from the University of Illinois with a degree in General Engineering. He worked in management consulting for several years in Chicago and New York City before pursuing a career in medicine. He graduated from Rush University in 2019 and had two daughters, Eleanor and Marie Therese, along the way. Brendan enjoys basketball, playing guitar, and spending time with his family.



**Tyler M. Rist, M.D.**, grew up in Huntsville, AL, before moving to Memphis, TN. At the University of Memphis, he played collegiate soccer and received a Biomedical Engineering degree. He earned an M.D. from the University of Tennessee where he met Dr. Boyd Gillespie, who encouraged him to pursue a career in ENT. Tyler enjoys trying new restaurants and going to the beach with his wife, Elle, and dog, Addie. He is also currently learning how to kiteboard.

**2020-2021 Fellows** - MUSC offers otolaryngology fellowships in five subspecialties.



**Mahmoud I. Awad, M.D.**  
**Facial Plastic & Reconstructive Surgery Fellow**  
 MD: Weill Cornell Medicine - Qatar  
 Residency: New York-Presbyterian Hospital  
 Special Interests: Oral cavity cancer, HN reconstruction, quality of care, outcomes research



**Tekin Baglam, M.D.**  
**Pediatric Otolaryngology Fellow**  
 MD: Marmara University Istanbul, Turkey  
 Residency: Marmara University Istanbul, Turkey  
 Special Interests: Pediatric Head and Neck, Pediatric Thyroid Diseases, Pediatric Otolaryngology



**Joel C. Davies, M.D., MSc**  
**Head and Neck Surgical Oncology Fellow**  
 MD: University of Toronto, Canada  
 Residency: University of Toronto, Canada  
 Special Interest: Microvascular head and neck reconstructive surgery, tumors of the head and neck, outcomes research



**Amar Miglani, M.D.**  
**Rhinology & Skull Base Surgery Fellow**  
 MD: Albert Einstein College of Medicine  
 Residency: Mayo Clinic Arizona  
 Special Interest: Allergic rhinitis and sinus disease, Nasal obstruction, Nasal polyps, Endoscopic endonasal surgery, Severe nasal polyposis, Sinonasal tumors, Pediatric allergy and sinus disease, Sinus surgery, Skull base surgery



**Mallory J. Raymond, M.D.**  
**Neurotology Fellow**  
 MD: University of Miami Miller School of Medicine  
 Residency: Emory University  
 Special Interest: Medical and surgical education, cochlear implant outcomes, the relationship between cognitive impairment and hearing loss.



**Vilija Jo Vaitaitis, M.D.**  
**Head and Neck Surgical Oncology Fellow**  
 MD: Louisiana State University, New Orleans  
 Residency: Louisiana State University, New Orleans  
 Special Interest: Tumors of the head and neck, Microvascular surgery and survivorship

## Division of Clinical Trials and Innovative Medicines

Shaun A. Nguyen, M.D., FAPCR, Clinical Research Director  
Thomas C. Lackland, MA, Clinical Trials Operations Manager

The Department advances the research of pharmaceutical, biological and medical device products by developing collaborations between industry and academia. We seek to provide an efficient integration of academic expertise and industry clinical objectives by offering industry sponsors access to valuable scientific leadership in the areas of clinical trials, evidence-based health care, analysis of high quality clinical trial data, along with providing the latest research treatments to our patients before the treatments are widely available.

### Head and Neck

A Single-Site, Parallel-Group, Randomized-Controlled Pilot Trial Comparing BRIGHT with Active Control in Reducing Body Image Disturbance Among Head and Neck Cancer Survivors (BRIGHT 2.0).

A Single-Site, Parallel-Group, Randomized-Controlled Trial of Navigation Versus Usual Care for The Management of Delays and Racial Disparities Starting Postoperative Radiation Therapy in Adults with Surgically-Managed, Locally Advanced Head and Neck Squamous Cell Carcinoma (NDURE 2.0).

A Randomized Phase II/III Trial of De-Intensified Radiation Therapy for Patients With Early-Stage, P16-Positive, Non-Smoking Associated Oropharyngeal Cancer.

A Phase II/III Randomized Study of Maintenance Nivolumab Versus Observation in Patients With Locally Advanced, Intermediate Risk HPV Positive OPCA.

A Randomized, Double-blind, Adaptive, Phase II/III Study of GSK3359609 or Placebo in Combination With Pembrolizumab for First-Line Treatment of PD-L1 Positive Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma.

Phase II Randomized Trial of Avelumab Plus Cetuximab Versus Avelumab Alone in Advanced Cutaneous Squamous Cell Carcinoma of the Skin (cSCC).

Association of Connectivity Dysregulation with Image Disturbance in Head and Neck Cancer Survivors.

A Phase 2 Efficacy and Safety Trial of ADU-S100 and Pembrolizumab in Adults With Head and Neck Cancer.

A Phase 3, Randomized, Double-Blind, Placebo-Controlled Study of Cabozantinib (XL184) in Subjects With Radioiodine-Refractory Differentiated Thyroid Cancer Who Have Progressed After Prior VEGFR-Targeted Therapy.

A Phase 3, Randomized, Double-blind, Placebo-controlled Study to Evaluate Pembrolizumab Versus Placebo as Adjuvant Therapy Following Surgery and Radiation in Participants with High-risk Locally Advanced Cutaneous Squamous Cell Carcinoma.

A Phase II Study of Durvalumab (MEDI 4736) with Radiotherapy for the adjuvant treatment of Intermediate Risk Head and Neck Squamous Cell Carcinoma.

A Randomized, Phase II Study of Ficlatazumab with or without Cetuximab in Patients with Cetuximab-Resistant, Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma.

Randomized Phase II/III Trial of Radiotherapy with Concurrent Durvalumab vs. Radiotherapy With Concurrent Cetuximab in Patients With Stage III-IVB Head and Neck Cancer With a Contraindication to Cisplatin.

A Phase 2, Multicenter, Open-label Study to Evaluate the Efficacy and Safety of CDX-3379 in Combination with Cetuximab in Patients with Advanced Head and Neck Squamous Cell Carcinoma.

Pembrolizumab in Combination with Anti-platelet Therapy for Patients with Recurrent or Metastatic Squamous Cell Carcinoma of the Head and Neck.

Phase II Trial of Nivolumab, a Anti-PD-1 Monoclonal Antibody, as a Novel Neoadjuvant Pre-surgical Therapy for Locally Advanced Oral Cavity Cancer.

Phase II Investigation of Adjuvant Combined Cisplatin and Radiation With Pembrolizumab in Resected Head and Neck Squamous Cell Carcinoma.

Clinical Evaluation of the OncAlert® RAPID in Subjects Presenting for Evaluation and/or Initial Biopsy; Impact on Decision-Making.

Transdisciplinary Oral/Oropharyngeal Cancer Research & Care in Head and Neck Cancer (TORCH): A Prospective Non-Randomized Study by the Head and Neck Oncology Group (HNOG) at the Medical University of South Carolina (MUSC).

### Obstructive Sleep Apnea

Targeted Hypoglossal Neurostimulation Study #3 (THN3).

Adherence and Outcome of Upper Airway Stimulation (UAS) for OSA International Registry.

The Dual sided hypoglossal neRvE stimuLation for the treatMent of obstructive sleep apnea study (DREAM study). To start Fall 2020.

Treating Obstructive Sleep Apnea using Targeted Hypoglossal Neurostimulation (LNS005- The Osprey Study). To start Fall 2020.

### Otology & Neurotology

#### Eustachian Tube Dysfunction

Treatment of eustachian tube dysfunction (ETD) and facial pain with combined acoustic vibration and oscillating expiratory pressure.

#### Meniere's Disease

A prospective, randomized, double blind, placebo-controlled, multicenter, phase 3 efficacy and safety study of OTO-104 given as a single intratympanic injection in subjects with unilateral meniere's disease.

# Sound Pharmaceuticals Advances to Pivotal Phase 3 Clinical Trials in Meniere's Disease

Sound Pharmaceuticals (SPI) recently announced that the FDA has allowed its pivotal Phase 3 clinical protocol for SPI-1005 in the Treatment of Patients with Meniere's Disease (STOPMD-3). This follows the successful completion of two randomized double-blind placebo-controlled studies (RCTs) and the grant of Fast-Track Designation. SPI-1005 is the first Phase 3 study of an investigational new drug for the treatment of Meniere's Disease (MD). SPI's clinical data from the two completed multi-center, RCTs (Phase 1b and Phase 2b clinical trials) showed that oral delivery of SPI-1005 for 21 or 28 days improved sensorineural hearing loss, word recognition, and tinnitus in patients affected by MD. SPI competed an End-of-Phase 2 Meeting with the FDA late last year and will conduct the STOPMD-3 protocol at over 16 US sites. MUSC has lead both the Phase 1b and 2b studies, and **Paul R. Lambert, M.D.** will be the Principal Investigator for STOPMD-3.

In addition, SPI has received FDA approval to begin two Phase 2 studies to prevent and treat COVID-19. In addition, SPI will be utilizing the non-clinical and pre-clinical services program offered by the National Institute of Allergy and Infectious Diseases (NIAID). This collaboration will involve the expanded testing of SPI-1005 both in vitro and in vivo, including a unique live animal model of COVID-19 transmission.

## About SPI-1005

SPI-1005 is an investigational new drug that contains ebselen, a novel small molecule that mimics and induces the activity of Glutathione Peroxidase (GPx) in the inner ear, retina, brain, lung, and kidney. SPI-1005 represents a novel class of anti-inflammatory and is under clinical investigation in several neurotologic diseases where GPx activity is reduced including sensorineural hearing loss, tinnitus, ototoxicity, Meniere's disease, and neuropsychiatric illness including bipolar mania. SPI-1005 is currently being tested in a Phase 2b study where Cystic Fibrosis patients with acute pulmonary exacerbations are receiving IV antibiotics to treat their respiratory infection.

## About Sound Pharmaceuticals

A privately held biotechnology company is testing SPI-1005 under five active Investigational New Drug Applications involving several neurotologic indications, including an ongoing Phase 2 clinical trial in Cystic Fibrosis patients receiving IV tobramycin for the treatment of pulmonary exacerbation, and Phase 2 studies to prevent and treat COVID-19. This ongoing study is also lead by MUSC.

Details of the SPI-1005 clinical trials can be viewed online at [www.clinicaltrials.gov](http://www.clinicaltrials.gov).

SPI-1005 a Novel Treatment for Meniere's Disease (NoMD) Phase 3 trial (to start Fall 2020).

Assessing the Efficacy of a Serotonin and Norepinephrine Reuptake Inhibitor for Improving Meniere's Disease Outcomes

## Pediatric Otolaryngology

Randomized Controlled Trial of Valganciclovir for Asymptomatic Cytomegalovirus Infected Hearing Impaired Infants (ValEAR Trial).

A 16-Week Randomized, Double-Blind, Placebo Controlled, Parallel-Group, Multicenter Study Evaluating the Efficacy and Safety of OPN-375 186 µg Twice a Day (BID) in Adolescents with Bilateral Nasal Polyps followed by a 12-Week Open-Label Treatment Phase.

## Rhinology

### Chronic Sinusitis

Open Label Extension Study of Omalizumab in Patients with Chronic Rhinosinusitis with Nasal Polyps.

A Multicenter, Randomized, Double-Blind, Parallel-Group, Placebo-Controlled Phase 3 Efficacy and Safety Study Of Benralizumab in Patients with Severe Nasal Polyposis (OSTRO).

A 24-Week Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multicenter Study Evaluating the Efficacy and Safety of Intranasal Administration of 186 and 372 µg of OPN-375 Twice a Day (BID) in Subjects with Chronic Sinusitis With or Without the Presence of Nasal Polyps.

A Phase 2a, Randomized, Double-Blind, Placebo-Controlled, MultiCenter Study to Evaluate the Effect of GB001 in Patients with Chronic Rhinosinusitis with or without Nasal Polyps

A randomized, controlled, single-blinded study comparing outcomes after treatment with the ClariFix cryotherapy device with outcomes after a sham treatment in patients with chronic rhinitis

EFC16724: A randomized double-blind parallel group study assessing the efficacy of dupilumab in patients with uncontrolled Allergic Fungal Rhinosinusitis (AFRS).

## Upper Respiratory Infection

Use of novel Sinusonic device for prevention of community acquired upper respiratory infection (URI).

# Upcoming CME Events

## The Charleston Pharyngoesophageal Manometry Program

January 2021

This day and a half course provides in-depth training on the utilization of high resolution manometry for evaluation and management of pharyngeal and esophageal dysphagia. Designed for speech pathologists and otolaryngologists, we will cover pharyngeal and esophageal diagnostic examinations and the use of HRM for biofeedback in dysphagia therapy. A hands-on laboratory session provides real time instruction and software interpretation practice. *More info soon!*

## The 8th Annual Charleston Pediatric ENT Update

February 2021

A comprehensive full day course designed to provide pediatricians, family practitioners, and otolaryngologists with up-to-date guidelines to implement in their daily practice, promote quality and efficient care, and tackle challenging ENT diagnosis with confidence.

## Southern States Rhinology Course

April 22 - 24, 2021 Kiawah Island and MUSC Campus

This course is intended for practicing Otolaryngologists and will feature presentations on topics for the practicing rhinologists and sinus surgeons. A hands-on laboratory dissection is available, featuring state-of-the-art endoscopic instrumentation, video, and image guidance systems.

## The 19th Temporal Bone Dissection Course

Date TBD MUSC Campus

An intensive two-day otology course that offers lectures and hands on labs focused on procedures for chronic ear disease. For practicing otolaryngologists.

## 20th Annual Charleston Magnolia Conference

June 4-5, 2021 Hyatt House Charleston Historic District

Two half-day sessions covering the broad spectrum of Otolaryngology – Head and Neck Surgery. The lectures and round table discussions are specifically aimed at the practicing otolaryngologist. There will be ample opportunity for questions, comments, and presentation of cases by the audience. Our goal will be to review and to provide the latest information on a broad range of topics, so that optimal diagnostic and management strategies can be formulated.

## The Charleston Course, 11th Annual Otolaryngology Literature Update

July 16 & 17, 2021 Kiawah Island Golf Resort

This course is designed to help the busy clinician stay current in our rapidly expanding specialty. Fifteen of our faculty members are charged with reviewing last year's literature and choosing five to eight best articles in their subspecialty for critical review. In two days, more than 100 manuscripts will be reviewed, and those "pearls" important to your practice will be emphasized. There may be no better way to stay current in our field than with the Charleston Literature Course!

## The Charleston Vestibular Update

November 2021 MUSC Campus

This one-and-a-half day conference is designed for all providers involved in the care of patients with vestibular disorders. The course will cover many key topics on the evaluation and management of dizzy patients to provide current knowledge and the ability to employ best practices when servicing this population.

## The 36th Annual F. Johnson Putney Lectureship in Head & Neck Cancer

Fall 2021 MUSC Hollings Cancer Center

This half day lectureship will bring together world class Head and Neck specialists to discuss improving the quality of health care for patients with head and neck cancer.



Some details are still in the works! Visit our website for updates: [muscd.edu/ent/cme](https://muscd.edu/ent/cme)

For course registration or more information: Julie Taylor, [taylojul@muscd.edu](mailto:taylojul@muscd.edu) or 843-876-0943



## Ranked #13 in the Nation, and the only ranked ENT group in South Carolina



The MUSC Department of Otolaryngology - Head & Neck Surgery continues to rank among the elite programs in the country in education, clinical research and clinical trials, basic research, and patient care. “We take enormous pride in this special Department, but acknowledge that our Department does not function in isolation, and thus we applaud the leadership and infrastructure provided by MUSC and our amazing colleagues across the enterprise.”

Paul R. Lambert, M.D.  
Professor and Chair  
Department of Otolaryngology - Head & Neck Surgery

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## THE MEDICAL UNIVERSITY OF SOUTH CAROLINA

Founded in 1824 in Charleston, the Medical University of South Carolina is the oldest medical school in the South. Today, MUSC continues the tradition of excellence in education, research, and patient care. MUSC educates and trains more than 3,000 students and nearly 800 residents in six colleges, and has more than 17,000 employees. As the state's only integrated academic health science center and largest non federal employer in Charleston, the university and its affiliates have collective annual budgets in excess of \$3.2 billion, with an annual economic impact of nearly \$4 billion and annual research funding in excess of \$284 million.

As the clinical health system of the Medical University of South Carolina, MUSC Health is dedicated to delivering the highest quality patient care available, while training generations of competent, compassionate health care providers to serve the people of South Carolina and beyond. Comprising some 1,600 beds, more than 100 outreach sites, the MUSC College of Medicine, the physicians' practice plan, and nearly 275 telehealth locations, MUSC Health owns and operates eight hospitals situated in Charleston, Chester, Florence, Lancaster and Marion counties. In 2020, for the sixth consecutive year, U.S. News & World Report named MUSC Health the No. 1 hospital in South Carolina.

Changing What's Possible