



# UNC

DEPARTMENT OF OTOLARYNGOLOGY/  
HEAD AND NECK SURGERY

# HEADS

SPRING 2012 • VOL. 15 • ISSUE 1

# Up

## Medical Students: A Valuable Asset in Departmental Research



**DEPT OF OHNS MEDICAL STUDENTS:** (Left to right) Omar Awan, Candace Mitchell, Vishal Dhandha, Rounak Rawal, and Maxwell Pike

*"Medical students are our future doctors, healthcare leaders and researchers. Drs. Harold Pillsbury and Wendell Yarbrough gave me an opportunity as a medical student to work in this great department as a student and that experience has significantly shaped my career. I hope to have the same impact on the medical students working in my lab. My goals for the student research experience are to instill vigor to ask and test research questions to improve our patient's health and outcomes. An additional benefit is learning from the students to become a better mentor and making new life-long friends and colleagues."*

- **Adam M. Zanation, MD**, Assistant Professor and Medical Student Mentor for Department of OHNS

The Department of OHNS has a long-standing tradition of encouraging student doctors to intern alongside faculty and residents. Through these internships, the

department hopes aggressively to prepare them for their future roles in medicine. During their time in the department, students gain a unique vantage point on the daily life of an otolaryngology clinician or researcher. The opportunities gained through this experience are unparalleled: they use industry-standard tools, equipment and software, and benefit from the inimitable exposure to world-renowned physicians, leaders and scientists working in Otolaryngology/Head and Neck Surgery at UNC-Chapel Hill.

Any given day, students can be seen bustling through the administrative offices of the Physicians' Office Building, to the OR, or within the Glaxo Research Lab building. They are all busy working on exciting projects, but I took a moment to interview the students spending all year in the department about their current efforts.

In addition to their ongoing projects, each presented at the UNC Medical Student Research Day, held on January 19. Of the six awards that were presented at Student Research Day, three winners were students affiliated with Department of OHNS lab: Christopher Lam won Basic Science Poster; Vishal Dhandha won Clinical Science Oral; and Hira Hasnain won Clinical Science Poster.

**OMAR AWAN** is a fourth-year medical student who is taking a year to do research with Drs. Douglas Fitzpatrick, Craig Buchman, and Oliver Adunka. He graduated from UNC – Chapel Hill with a degree in Applied Sciences concentrating in Biomedical Engineering. He is currently involved in projects ranging from understanding temporal cues for sound discrimination to the effects of cochlear implants on cochlear structures. Temporal sound cues, such as voice-onset timing, are integral for differentiating consonants and the project is attempting to clarify whether

MEDICAL STUDENTS *continued on page 3*

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On March 16, 2010, Natalie Larson was born profoundly deaf. Although her parents were devastated at hearing the news, they acted quickly, and made the right choice by bringing Natalie to see Dr. Craig Buchman. The following is a letter Natalie's mother, Melissa Larson, wrote to Dr. Buchman:

Dr. Buchman,

Just wanted to touch base with you and say hi. We haven't had the opportunity the past many months to have Natalie seen by you, but I can assure you she has been doing remarkable. Yesterday we celebrated her **1st Hearing Birthday**. We are so blessed and fortunate for her progress thus far. She had a speech evaluation 2 weeks ago at CCCDP and she tested in the average range for her speech and language. She has caught back up so quickly.

I just want to express my gratitude to you for all your love and guidance early on with Natalie. I know we made the right decision in coming up to Chapel Hill and I am so thankful that with your busy schedule you were able to fit us in and get us on the right path we needed to be on. And a big thank you for suggesting we do bilateral implants and for allowing us to have it done at such an early age (and so very thankful our insurance allowed it!) I really believe that is part of the reasons she has

# A Letter to DR. BUCHMAN



**PRE-OP:** Dr. Buchman with Natalie and her father, Timothy Larson, on surgery day January 4, 2011. Natalie was the recipient of bilateral cochlear implants.

been doing so well. There was never an awkward time for her going from the non-hearing world to hearing. It was so gradual and natural for her (and us) and I have always been completely at ease with how well things have worked out. Of course there are small struggles here and there, but overall, she has exceeded our expectations on what is possible in a year. I know the sky is the limit!

Thank you for your love and kindness, your guidance and talents and being so passionate about what you do. We are forever grateful for your talents in caring for our sweet daughter.

I made a video of Natalie's first hearing year and wanted to share it with you. Hopefully we will get the chance to see you in June before we relocate up to Cincinnati for Tim's hand surgery fellowship. We are enrolling Natalie in a school, Ohio Valley Voices, which is phenomenal. Just click on the link to watch her video in You Tube.

<http://go.unc.edu/y4RDj>

Thanks again for all you have done for our family,

Melissa



## Chair's Corner



Harold C. Pillsbury, MD

Our Spring Issue of Heads Up is dedicated to the outstanding contributions our medical students make to the research program in our department. They have been tremendously dedicated, creative, inquisitive, and brilliant all at the same time. Most of

them have gone into Otolaryngology residencies and many of them have ended up at UNC. It is difficult to send your most productive candidates away when they have so much to offer here. However, there have been so many interested in Otolaryngology that we could not possibly take all of them in our program so we have prepared, in essence, many of the best researchers in the field receive opportunities in other universities. This is a source of great pride and joy for all of our faculty members and really solidifies one of our primary missions. I hope that you, the readers of this publication, will get to meet these wonderful young people during the course of their medical and surgical careers. I am sure you will be as inspired by them as I have been over the past many years.

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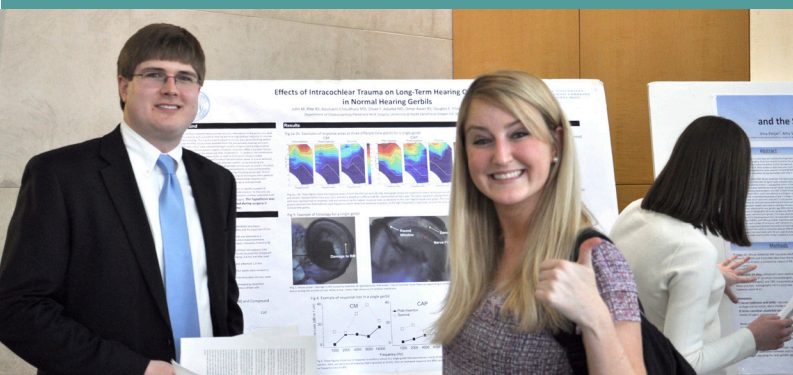


# MEDICAL STUDENTS

## *continued from cover*

this is a higher-level process unique to humans or may potentially be a lower-level process shared among other animals. The other major project involves an animal model for the type cochlear implant candidates who may benefit from electroacoustic stimulation and understanding the potential complications of cochlear implants in these patients such as trauma to delicate cochlear structures that still have residual function. In addition he is part of the Eugene S. Mayer Society for community service done in Eastern North Carolina and Nicaragua, as well as the John B. Graham Society for student research.

*"I am interested in how speech develops, how that is affected by hearing, and how interventions can potentially mitigate those effects. The work this year is a great introduction to the field and will hopefully be the beginning of a long and fruitful academic career."*



**STUDENT RESEARCH DAY:** Maxwell sparks a young ladies' interest in research.

**MAXWELL PIKE** is a rising 4th year medical student at UNC. He is currently involved in a year of research with Dr. Doug Fitzpatrick and the Otolaryngology program. Before medical school, He was an undergraduate student at Washington and Lee University in Lexington, VA, where he competed on the varsity swim team. He is from Goldsboro, NC originally, and his personal hobbies include basketball, duck hunting, and listening to audiobooks. He was recently inducted into the John B. Graham Medical Student Research Society for presenting work completed over the past year. The research focuses on cochlear implant technology and is geared towards developing techniques to monitor cochlear function and physiology during implantation surgery. Previous data showed that upon the electrodes impact with cochlear structures small changes in cochlear potentials can be detected across a wide range of frequencies and intensities by measuring changes in acoustically evoked potentials, including the cochlear microphonic (CM) and compound action potential (CAP), in normal

hearing gerbils. In order to use this information in a clinically applicable manner, the goal of this project is to measure the long-term effects of cochlear implantation trauma on normal hearing gerbils. The hypothesis is that the loss of function that can be measured acutely using electrophysiologic measurements of CM and CAP following electrode trauma is predictive of the long term outcome of cochlear function. Ultimately, this information will allow surgeons to more accurately interpret a patient's long-term outcome after undergoing the electrode insertion process.

*"This year has provided me with an excellent opportunity to advance my knowledge of a field which I find incredibly interesting, specifically hearing preservation, as well as obtain valuable hands-on experience in medical research. I am extremely grateful for the opportunity provided to me by the Otolaryngology department here at UNC, and am planning to utilize the knowledge I have gained in my further pursuit of an academic career."*

**VISHAL DHANDHA** is from Fayetteville, NC and graduated from the University of North Carolina, Chapel Hill in 2008 with a BS in Biology. He enrolled at the School of Medicine the following fall, where he's completed 3 years prior to taking this year to do research in the department. His primary project focuses on using computational fluid dynamics (CFD) in virtual functional endoscopic sinus surgery models to determine how alternate maxillary anastomies may impact parameters such as air flow and drug delivery. Using software called Mimics™, Vishal can re-create 3D models of the nasal airway using existing CT scans. Mimics™ is similar to any photo-editing software, and many of the actions required to create the 3D models amount to drawing and erasing individual pixels. The virtual surgery models that are generated include "mini-anastomies" meant to reflect partial removal of the uncinate process, an expanded anastomy that resects the posterior half of the inferior turbinate, and one that spares the inferior turbinate. Once the models are created, a different computer program can simulate outcomes such as air flow and drug delivery using specific CFD algorithms, and the results allow us to compare differences between the various models. Ultimately, the goal is to determine if this type of analysis can be used to essentially conduct virtual clinical trials for FESS patients.

*"The concept of virtual surgery and its potential applications both in research and clinically as a pre-operative assessment tool is exciting, and it is wonderful to be able to utilize my hobby of graphics design in a way that it may contribute to the world of otolaryngology."*

**CANDACE MITCHELL** is a UNC medical student spending the year working in Dr. Zanation's lab as a

Holderness Distinguished Medical Scholar. She chose to spend the year doing research in the OHNS department here at UNC after becoming enthralled with the specialty last year during her 3rd year rotation in order to be better prepared to pursue a career in the field of OHNS.

In Dr. Zanation's lab, Candace has been involved in a number of diverse projects. Her primary project is a tissue microarray (TMA) investigating the role of human papillomavirus (HPV) in inverted Schneiderian papilloma (ISP). Using specimens from the pathology tissue bank from 1991-present, she is assembling a TMA of approximately 200 distinct ISP tumors, including any dysplastic tissue or squamous cell carcinoma arising from ISP and using both non-inverted papillomas and nasal polyps as controls. Once assembled, these TMAs will be used to perform immunohistochemical staining for various HPV-related and/or cell-cycle regulatory proteins including E6, E7, p16, p53, Rb, and Cyclin D. The study's hypothesis is that differential patterns of expression exist for these markers when benign and malignant ISPs are compared with one another as well as with controls.

Candace says she finds this project exciting given the recent flurry of information, evidence, and publicity surrounding HPV and its role in cancers of the head and neck. She hopes that results from the study can provide new data regarding HPV's role in ISP and its malignant transformation, perhaps informing clinical management or even providing potential therapeutic targets for patients with this tumor type.

Candace grew up in Raleigh and graduated from Harvard University in 2007 with a Concentration in Biochemical Sciences and a Citation in Spanish. After graduation, she spent a year prior to medical school working in a graphic design firm and volunteering as a Spanish interpreter at Wake County Human Service's pediatric health clinics. Even when not in lab, Candace spends a lot of time experimenting—in the kitchen, concocting new recipes or visually, as an amateur photographer. She enjoys running, tennis, and soccer among other sports and has most recently become an avid road biker. Her remaining free time is largely spent pursuing musical interests: she plays violin and sings in the praise band at Christ United Methodist Church in Southern Village.

Vishal's hobbies include playing basketball and golf and supporting Tar Heel athletic teams. He also enjoys volunteering, particularly coaching youth sports.



**STUDENT RESEARCH DAY:** Rounak impresses a judge.

**ROUNAK B. RAWAL** is a medical student transplanted to Chapel Hill from Boston University. He is taking a year off between his third and fourth years as a Doris Duke Clinical Research Fellow under the guidance of Dr. Zanation. He came to UNC for his fellowship because of the excellent mentoring track record Dr. Zanation has had since he himself was a Doris Duke Fellow ten years ago ('01-02). Rounak counts himself extremely fortunate for this opportunity to do research at such an exceptional yet collegial department. His research projects and mentors have only strengthened his desire to continue into academic otolaryngology in the near future.

Rounak's main clinical research project is a randomized controlled trial studying topical steroid effects in nasal irrigation formulae for post-polypectomy patients. Outcomes are measured with olfactory tests, endoscopic grading, and quality of life surveys. His basic science research project is comparing antibody markers for low-grade vs. high-grade mucoepidermoid carcinoma via tissue microarray analysis. Other projects include studying the changes in resident stress levels during image-guided sinus surgery, tracking the management of anterior skull base encephalocele over the past 11 years, and analyzing outcomes of the first cohort of patients with nasoseptal rescue flap utilization.

When not writing in third person, Rounak plays for the UNC Men's Squash team. Hailing from the great state of New Jersey, he is an avid Jets fan and supports the Nets as much as he can bear it. He also enjoys forcing his friends to try his experimental cooking, attending as many local concerts as he can, and reading a good book whenever possible. 📖

## PLEASE CONSIDER MAKING A GIFT TO THE DEPARTMENT!



Leslie H. Nelson  
Director of Development

In the present health care environment, clinical income and federal grants are no longer adequate to meet the overall mission of our Department. Additional private and corporate funds are needed to ensure our future growth. Private gifts allow us to continue making research breakthroughs that form the foundation of new and improved methods of patient care. They also make it possible for us to attract and retain the best teachers, clinicians and promising scientists to train future surgeons.

There are many giving options available to support the efforts of our Department. Please contact our Director of Development for more information on how you can help.

### Leslie H. Nelson

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#### SOUTHERN SECTION GUEST INTRODUCTIONS:

C. Gaelyn Garrett, MD presenting awards to Citation Awardees, Drs. Mark S. Courey, MD (San Francisco, CA), Amelia F. Drake, MD, Robert H. Ossoff, DMD, MD (Nashville, TN), and Lou Reinisch, PhD (Nashville, TN) and Guest of Honor, Harold C. Pillsbury, MD

# TRIOLOGICAL SOCIETY 2012

The Department was highly visible at the Combined Sections Meeting of the Triological Society in Miami, Florida which took place on January 26-28, 2012. Dr. Harold Pillsbury was in attendance as an esteemed Guest Of Honor. C.

Gaelyn Garrett, MD presented Citations to Drs. Mark S. Courey, MD (San Francisco, CA), Amelia F. Drake, MD, Robert H. Ossoff, DMD, MD (Nashville, TN), and Lou Reinisch, PhD (Nashville, TN) and Harold C. Pillsbury, MD.

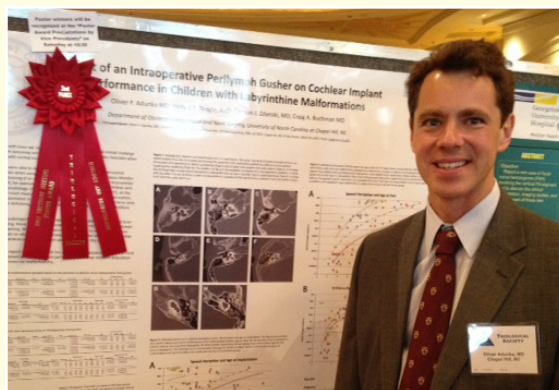
Dr. William Shockley was included on the panel Cutaneous Malignancies and Local Flap Reconstruction, and his topic was entitled "Reconstruction of Nasal Defects with Full Thickness Skin Grafts." He was also involved in a discussion about surgical management of cases presented by the Moderator, Dr. Stephen Park.

Dr. Pillsbury's Guest of Honor speech featured his sincere and at-times humorous bucket list, and items included "Have UNC-OHNS Reach Top 10 In US News And World Report," "Become A Better Sailor," and "Bask In The Referenced Glory



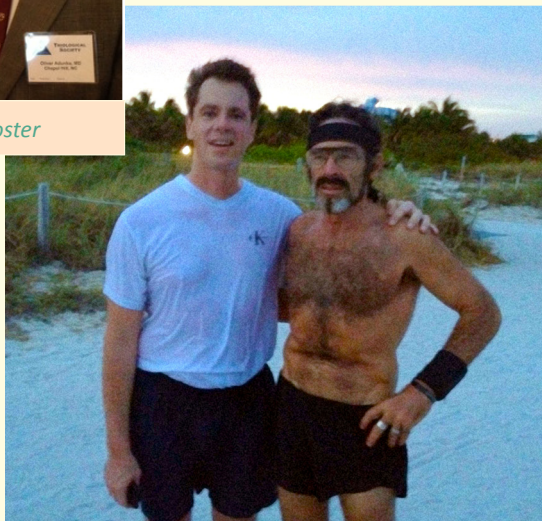
***Bask in the referenced glory of the success of UNC-OHNS Residents.***  
- From the *Bucket List* of Dr. Harold Pillsbury

Of The Success Of UNC-OHNS Residents." The list was well received by the society meeting attendees.



**SECOND PLACE:** Dr. Adunka with winning poster

Dr. Oliver Adunka was awarded 2nd place for his poster presentation at the Triological Society's Combined Sections Meeting. "Effect of an intraoperative perilymph gusher on cochlear implant performance in children with labyrinthine malformations" was a collaborative effort between Drs. Adunka, Craig Buchman, Carlton Zdanski and Audiologist Holly F.B. Teagle.



**HEREBY NAMED, "COCHLEA":** Dr. Adunka with Raven

Dr. Adunka was also bestowed a special honor while in Miami for the Combined Sections Meeting. Oliver Adunka, aka "Cochlea", embarked on a run with "Raven," a local running celebrity, and accompanied him on an

8-mile run along South Beach. As is his standard practice of imparting nicknames to fellow running mates, Raven inducted Dr. Adunka into the Raven List by bestowing upon him the nickname, "Cochlea." Read more about the interesting history of Raven and his 8 mile runs everyday for over 35 years at <http://ravenrun.net/>



**HEADING HOME:** UNC-OHNS residents, faculty, medical students and friends



# Farewell to Elaine Hinkle, RN

The Chair and Facial Plastics Chief bestow their sincere well wishes to a dynamite and irreplaceable asset.

**BITTERSWEET LAST DAY:**  
Elaine Hinkle, RN and William Shockley, MD



*It is difficult for me to express how much we will miss Elaine Hinkle. She has been an integral part of our clinic having fulfilled every duty one could be anticipate and completing everything with grace and excellence. She constantly strove to be a leader among her peers and was the rock on which the faculty and resident staff depended upon whenever an emergency arose. There are few people you could count on with as much assuredness as Elaine when it came to being where a nurse was needed at any given point in time.*

*To say I will miss her significantly is an understatement. We all wish her well in the future and know that while we will find an individual to fill her job, she will never truly be replaced.*

- Dr. Harold C. Pillsbury

**RECOGNITION:** Dr. Pillsbury presents Elaine with UNC certificates at her retirement luncheon, January 30, 2012



*It is certainly with mixed emotions that we observe the retirement of Elaine Hinkle who has been the guiding force of our ENT Clinic for the past 27 years. There is no question that she is our "franchise player." As one of the premier ENT nurses in the state, Elaine is someone that every physician and every nurse has relied on throughout her tenure. If we need an answer we go to Elaine, if we need the solution to a problem we go to Elaine. Her loyalty and attention to detail has allowed our practice to grow and our program to be successful, working in a clinic environment that is second to none.*

*Elaine and I have worked together for seventeen years. It has been not only my pleasure but an honor to have her by my side. There is no question that she has been an integral part of my professional success. She has a genuine caring nature and is loved by our patients. She is also a wonderful teacher and has taught the essential principles of ENT nursing to dozens of nurses. We will all miss her positive attitude and warm smile. There aren't enough words to express my gratitude for all that she has done for me, my patients, and our entire department. Hopefully with retirement she will be able to enjoy new horizons; we certainly wish her all the best and hope that there are many joyful moments her the future.*

- Dr. William W. Shockley



# OHNS Announcements

**Drs. Carlton Zdanski, Brent Senior, Harold Pillsbury, William Shockley, Mark Weissler, Oliver Adunka, Craig Buchman, and Amelia Drake** were selected as 2011-2012 Best Doctors in America.

**Dr. Trevor Hackman** completed his 20th Trans Oral Robotic Surgery, and is the first head and neck surgeon in the Carolinas to have accomplished this honor.

**ONLINE EXTRAS:** <http://go.unc.edu/j8GNx>

**Kathy Bogie** and **Donna Woodard** reached their 10-year marks with UNC, and each received a certificate and pin. **Donna:** "I have worked for UNC for 10 years, the whole time with ENT. I have three great docs that I work for. My favorite part of working in ENT are the people: our group in the POB is the greatest! We are like family. Of all the jobs I have had in my 40 years of working, this is one job that I don't dread coming to everyday."



**Dr. Oliver Adunka** was inducted as a 'Fellow of the American College of Surgeons.' Dr. Adunka was also invited to speak at the 4th International Interdisciplinary, AOCMF Course on Skull Base Surgery, Lateral Skull Base, Vienna, Austria, September 28-30, 2011.

**Dr. Oliver Adunka** was elected as a 'Corresponding Member' of the Austrian Society of Otolaryngology/Head and Neck Surgery. Dr. Adunka received this honor at the 55th Austrian ENT Conference, Vienna, Austria, September 14-17, 2011. He was an invited speaker, and participated in a round table discussion on lateral skull base surgery.

The collaborative work of **Drs. Meg Dillon, English King, Marcia Adunka, Emily**

**Buss, Harold Pillsbury, Craig Buchman, and Oliver Adunka** on "Objective and Subjective Benefits of Electric-Acoustic Stimulation: 12 month data," placed 3rd at the poster presentation of the UNC Commitment to Caring Quality Expo on October 25-26, 2011.

**Katie Chandler RN**, married Alex Sams in the mountains of Mars Hill, NC on Dec 17, 2011. It was a quiet service with friends and family. **Katie:** "We thank all of the ENT



Dept who gave such generous & thoughtful gifts. We look forward to starting our lives together."

**Donna Woodard** and **Alison Turner** both lost 5.6% of their body weight during the ENT Biggest Loser. The weigh was lost during the three major eating holidays: Thanksgiving, Christmas, and New Years, and each won \$75. **Alison:** I walked every day, and watched what I ate. I stopped putting sugar in my coffee, and ate smaller, frequent meals. It's certainly easier to stay on track, when you're held accountable by your co-workers!

UNC Health Care recognized **Gina Stoffel, RN** among the Winter 2012 Plus People.



**Dr. Carol Shores** received a \$5K grant from the University Research Co. for a project that Gift Mulima, a Malawi PGY3 general surgery resident and Javeria Qureshi, a UNC general surgery resident, are collaborating on. The money will be used to hire a clerk to collect prospective data on patients who present to Kamuzu Central Hospital with upper GI bleeds.

**Dr. Adam Zanation** was nominated for the Triangle Business Journal Health Care Hero Awards 2012 by the UNC Healthcare News

Office for his work with robotic surgery and pediatric patients. The "Rising Star Honor" is a recent graduate or new hire that shows real promise in the fields of scientific research or in the practice of medicine.

**Dr. Baishakhi Choudhury:** "A big thank you to Benjamin Wei, Otology fellow, for helping harvest 42 temporal bones from the East Carolina University anatomy department who were also very gracious for coordinating with us to come collect the bones. These bones provide an invaluable opportunity for the residents to learn anatomy and practice technique, and we are incredibly grateful. Afterwards, we stopped at B's BBQ, recommended by Kathy Harris, located near ECU's campus. It was fantastic and highly recommended, but you have to get there early because once they're out of BBQ they close for the day!"

**ONLINE EXTRAS:** WRAL nominated B's as NC's best BBQ <http://go.unc.edu/s6X4Y>



**Hannah Eskridge, MSP** and family are excited to announce that their family has grown. Gabre Meti Eskridge joined the Eskridge family in September 2011 at 9 months of age from Ethiopia. Gabre has two 5-year old siblings, Sarah Bess and Davis.



**FROM THE STORK**

Resident Dr. Joshua Surowitz and wife Jennifer, welcomed a baby boy, Jackson Thomas, January 22



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Carolyn Hamby, Clinical Academic Departmental Administrator

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Oliver F. Adunka, MD, Associate Professor  
Holly F. B.Teagle, AuD, Associate Professor, Program Director  
Hannah R. Eskridge, MSP, CCC-SLP, LSLS Cert. AVT, Clinical Instructor, Director of CASTLE

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Esa A. Bloedon, MD, Assistant Professor  
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