Department visionary: Frank C. Todd, MD, DDS

From his first days as an eye, ear, nose, and throat professor at the University of Minnesota, Frank C. Todd excelled as a clinician, teacher, and administrator. He was one of those people with big, ahead-of-his-time ideas. But the difference was his quiet and assured advocacy that convinced decision-makers to follow his lead.

Todd, a Minneapolis native, earned his dental and medical degrees from the University of Minnesota in 1891 and 1892 respectively. After completing advanced training in New York and Europe, Todd returned to the University in 1898 to become a clinical professor.

The medical school established the Eye, Ear, Nose and Throat (EENT) Department and selected Todd as its first chief in 1909. His leadership extended nationally, too, when he was elected second vice president of the American Medical Association in 1913.

“He was a very mild-mannered man and forward-thinking person whose interest was always in the betterment of the University of Minnesota Medical School,” Wilson says. “He was a terrific organizer and he was just a whiz at administration.”

Demonstrating his visionary leadership, Todd proposed that the University offer advanced training for its medical school graduates focusing on EENT, and the Board of Regents agreed. Todd designed a two-year program that would far exceed the typical post-graduate training of just six weeks. “This was greatly in advance of its time,” Wilson notes.

Todd also devoted significant effort to public health issues, championing hearing and vision screening for children and writing extensively about medical education and infectious diseases. When the United States entered World War I in 1917, Todd was one of the first to volunteer for the army. He was assigned to the Camp Dodge, Iowa, recruitment camp as a major, but quickly was promoted to lieutenant colonel and head hospital administrator.

Before long, Todd was traveling the country to help improve military hospitals during the Spanish Influenza epidemic. In July 1918, he fell ill in Chicago with a cold, which rapidly evolved to influenza and pneumonia. Todd,
Continued from page 1

49, died a few days later.

His death didn’t stop his influence, though. Todd’s wife, Mabel, found his proposal for a 40-bed EENT specialty hospital. She and family friends donated $40,000 to build the Todd Memorial Hospital, which opened in 1925 in Minneapolis. It’s part of Todd’s legacy at the University—opening doors for excellent clinical care and training for many generations of otolaryngologists. Even today, its last vestige, the Todd Amphitheater, is a much-used part of the Medical School.

A colleague at the time of Todd’s death said: “No man of the medical faculty of Minnesota was ever more beloved than was the late Frank Chisholm Todd. None brought to the faculty councils a more nicely balanced mind, a keener judgement, a sure sense of educational values than he did. He was at once a good teacher, an excellent clinician, and a capable administrator.”

Notes From the Chair

Early winter is the time when we start looking forward to the new year. We have plenty to get excited about in 2017 for the Department of Otolaryngology, Head and Neck Surgery!

There’s ongoing research into new treatments for otitis media, or middle ear infections, occurring in the otopathology lab of Nicole Kwon, Ph.D., and new approaches to treating H&N cancer, occurring in the lab of Jizhen Lin, M.D. There are clinical research opportunities for residents and other otolaryngologists to learn about minimally invasive ear surgeries from faculty member Manuela Fina, M.D.

In fact, Manuela and Meredith Adams, M.D., are hard at work planning an international symposium at the University on September 14-15, 2017. Titled “Endoscopic Ear Surgery and Current Advances in Otology,” the continuing medical education course will bring more than 15 experts from around the world to share their expertise in cutting-edge ear procedures.

The Department welcomes a new faculty member in H&N oncology. Sobia Khaja, M.D., is a new assistant professor who specializes in H&N oncology and microvascular reconstruction. She recently joined us after a fellowship in head and neck surgery at the Medical University of South Carolina.

It will be an exciting year, as our faculty, staff, clinicians, and patients continue to enjoy the benefits of the new MHealth Clinics and Surgery Center. This five-story, 342,000-foot facility hosts nearly all outpatient clinic and surgery activity on campus.

If you haven’t been to the University of Minnesota Medical School lately, pay us a visit in the Department of Otolaryngology/Head and Neck Surgery. If you are close to town, please come for our conferences and lectures, which are always more rich and fulfilling with the voices of alumni of the department. There are many young innovative physicians to meet as well, so there is plenty to do to get an up-close view about happenings in the department. We’d be glad to see you again. Best wishes for a happy new year!

In Memoriam...Joseph B. Carter, MD, FACS

“Dr Joseph Carter, former Chief of Otolaryngology at MetroHealth Medical Center, and long standing senior leader and educator in the Department of Otolaryngology-Head and Neck Surgery at Case Western Reserve University School of Medicine, passed away suddenly in August 2016. This event was a tragic loss to the Metrohealth and Case Western Reserve University Otolaryngology Departments and all of the alumni Dr Carter trained...” - Cliff A. Megerian, MD (for more online: casemed.case.edu/Otolaryngology/faculty/memorium.php

Dr. Carter completed his medical school training and residency (’80) at the University of Minnesota. Beloved husband for 40 years of Alison (nee Woody); loving father of Benjamin, Margaret and Sasha; cherished son of the late Joseph D. and Luella (nee Hammond); dearest brother of Nancy (Thomas) White and the late Janice Carter; dearest brother-in-law of Howard (Christine) Woody.
Sobia Khaja, MD
Complex cases, compassionate care

Free flap surgery can be a strange concept for patients. A head and neck surgeon like Sobia Khaja, M.D., repairs a deep wound from cancer or trauma by transplanting skin, muscle, or bone from one part of the patient’s body to another. It’s a long, complicated procedure that requires plenty of follow-up care and time with patients.

It’s this combination of surgical skill and patient care that drives Khaja, a new assistant professor of otolaryngology, head and neck surgery at the University of Minnesota. She brings empathy for the stress and uncertainty that patients experience coupled with expertise in microvascular surgery and the free flap operation.

“My favorite thing is the patient interaction. I love being able to talk to my patients and help them when they are dealing with some of the hardest things they have to deal with,” says Khaja. “I hope to provide them with some compassion for what they are going through. And it’s incredibly powerful to talk to them and the family after surgery when I tell them how things went.”

Khaja graduated from University of Iowa medical school, where she completed her otolaryngology residency. Next came a fellowship in head and neck surgery at the Medical University of South Carolina. Despite being a passionate Hawkeyes fan, Khaja joined the Minnesota faculty because of its supportive environment and opportunity to treat patients, teach residents, and ultimately do research.

She is continually inspired by the comprehensive cancer care offered at the University, which allows Khaja to provide patients with excellent care in partnership with clinicians from diverse specialties. Khaja seeks to offer comfort and knowledge to patients, reminding them that while it might be their first time having cancer, it’s not her first time treating patients like them.

“I tell them it’s my job to take care of them, that we’re trained to do this, and that we hope to provide them with good care, get them through it, and for the patient to be cured of cancer, if possible,” Khaja says.

Her focus on free flap surgery is a culmination of an interest in otolaryngology that began when she was a high school student in Michigan. Khaja had the chance to shadow her brother’s otolaryngologist in the clinic and operating room for a semester. Seeing her treat kids and adults and successfully fix their ear, nose, and throat issues ignited Khaja’s interest in the field. Though she attended medical school with an open mind, she continued to gravitate to otolaryngology.

Khaja enjoys mastering the technical expertise required to remove skin, muscle, and bone from a patient’s shin, forearm, or other part of the body. The procedure involves connecting the transplant with existing tissue, blood vessels, and nerves in the mouth, face, or neck. She meticulously rebuilds a patient’s tongue, jaw or nasal cavity after cancer, working to make everything look natural.

“I enjoy the cases. They are long and challenging, and it’s fascinating that you essentially do a transplant for people from their own bodies,” says Khaja. “It can be amazing when you see people who have had surgeries for trauma, cancer, a benign mass, a car accident, or a gunshot wound. We try to make them as close to the way they used to be.”

Dan Weinstein, Speech-Language Pathologist

Welcome to Dan Weinstein, the new Speech-Language Pathologist with the Lions Voice Clinic. Dan is a singer, having earned a Bachelor of Music from the University of Iowa, and a Master of Music in voice from the University of Wisconsin-Madison. He sang for several seasons with the Minnesota Opera Company, alongside our SLP, Lisa Butcher. He also earned a Master’s degree in Speech-Language Pathology from the University of Minnesota, Twin Cities, and became a Certified Vocologist from the famed Summer Vocology Institute at the National Center for Voice and Speech in Salt Lake City. Most recently Dan completed his Clinical Fellowship year in the country’s most coveted voice fellowship for Speech-Language Pathologists, at the Emory Voice Center in Atlanta, Georgia. Not only is Dan an accomplished singer and singing teacher, he brings his experience as an avid bicyclist to treatment of athletic breathing disorders. We’re thrilled to have him!
Manuela Fina: Bringing Endoscopic Ear Surgery to Minnesota

Manuela Fina, M.D., is a pioneer in minimally invasive endoscopic surgery for chronic ear diseases, and she’s working to share her expertise with physicians from the Upper Midwest and around the world.

An otologist—an otolaryngologist who specializes in diseases of the ear—Dr. Fina has been adopting the endoscopic approach to middle ear surgery since 2013; the earliest adopter in Minnesota. Endoscopic surgery provides numerous advantages to the patient, including faster recovery time, no visible scars, and significantly less pain.

Dr. Fina, an Assistant Professor of Otolaryngology, practices with HealthPartners, at Regions Hospital, and the VA Medical Center. She completed her residency in Otolaryngology Head & Neck Surgery at Washington University in St. Louis and came to Minnesota in 2001 for fellowship training in otology.

Dr. Fina grew interested in endoscopic ear surgery in 2011 because of the ability to better visualize the anatomy of the ear compared to the traditional microscopic view. To learn this innovative technique, she visited and trained with leading surgeons in using this approach in Italy, Canada and the United Emirates. To perform minimally invasive endoscopic surgery, the surgeon needs to hold the endoscope with one hand and operate with the other. This differs from traditional techniques that involve operating with two hands using a microscope.

Problem is, there are many parts of the middle ear that are difficult to visualize and access with a microscope. It often requires surgeons to make an incision behind the ear to gain access and sightlines to the structures behind the ear drum. With endoscopic ear surgery, the scope’s camera and its angled lenses gives surgeons a wide view, eliminating the need for an incision.

“It’s a huge advantage. You can see blind areas that you couldn’t see under the microscope,” explains Dr. Fina. “You can have a better view, preserve structures and restore function at the same time.”

Not requiring an incision, the endoscopic approach allows a much faster patient recovery and hardly any need for pain medications

Dr. Fina uses endoscopy to treat conditions like chronic ear infections, perforated ear drums, and cholesteatoma—an abnormal skin growth that can develop into a cyst which causes bone erosion. Left untreated, it often damages hearing and can causes dizziness and facial nerve damage. While traditional surgery certainly addresses these conditions, the endoscopic technique helps Dr. Fina see the anatomy more clearly and remove the abnormal tissue and infection following the pathway of disease spread and often preserving healthy mucosa and the mastoid bone.

“I’m very excited and enthusiastic about endoscopic ear surgery because it’s helped me improve so much as a surgeon,” Dr. Fina says. “Not requiring an incision, the endoscopic approach allows a much faster patient recovery and hardly any need for pain medications.”

Dr. Fina is engaged in several research projects, including one that compares results from endoscopic eardrum repair with traditional surgery. A new grant will fund Dr. Fina’s research into the effectiveness of treating cholesteatoma endoscopically.

After seeing such positive results for her patients, Dr. Fina has been teaching endoscopic ear surgery to the residents at the University of Minnesota and she was awarded a grant for a research project on the anatomy of the middle ear seen through the endoscopic approach. Dr. Fina has lectured widely on principles of endoscopic ear surgery nationally and internationally in Texas, California, Italy, France and Scotland.

Dr. Fina is planning a continuing medical education course at the University next fall. Called “Endoscopic Ear Surgery and Current Advances in Otology,” the international symposium will be held September 14-15, 2017 in Minneapolis. It will feature 15 leading experts from around the world. Dr. Fina is serving as course director with Meredith Adams, M.D. as co-director. The meeting will attract regional, national and international attendees due to the innovative content and the interactive, roundtable session format.

“This course is for neurotologists, otologists, and all otolaryngologists who do ear surgeries. The course will be very practical and focused not only on the endoscopic approach but on how to manage ear disease through new anatomical knowledge, new techniques and instrumentation,” Dr. Fina notes. “We want to show what is really new in otology.”
Leslie Palmieri
Science translator/Philanthropic Matchmaker

Leslie Palmieri gains a lot of satisfaction from helping others obtain their educational goals. It’s why she has spent her career in academia, and why she pursued a position at the University of Minnesota Foundation when her family moved here from the East Coast.

The senior development officer for otolaryngology, ophthalmology, and neurosciences, Palmieri came to the University in 2015 with two decades of experience in higher education. She worked in admissions at her alma mater, Fort Lewis College in Colorado, and then focused on major gifts fundraising at the University of Pennsylvania, Catholic University, and lastly at American University where she served as the Director of Development for the College of Arts and Sciences for five years.

At Penn, Palmieri partnered on fundraising with the Schools of Education and Engineering and Applied Science, where she developed a thirst for cutting-edge scientific research. Part of her role was to gain a strong understanding of the research in engineering and develop a case for support in lay terms that was used by all front-line fund-raising staff. Using explanations and metaphors the general public could understand helped build enthusiasm for the research from potential donors. Not only did they become more enthusiastic, but appreciated the urgency in supporting these projects generously.

When her husband’s job took them to the Twin Cities, Palmieri jumped at the opportunity to extend her higher education experience into a new realm. “I thought, ‘Here is a chance to work at an amazing research university and be on the health and medicine side of things,’” she says.

“I really believe in academic medicine and its components of patient care, teaching, and research because it enriches the patients’ experience. Working with grateful patients as potential donors is truly privilege. Patients who have good clinical outcomes or who are shown particular compassion often develop intense feelings of gratitude. Sometimes, they want to express their gratitude by supporting the mission of medicine and health. Frequently, giving back can be part of the healing process. It makes my job more meaningful to work with donors whose lives have been transformed by their experience here or by our research.”

Palmieri is motivated to play a small part in the big picture by potentially contributing to a medical breakthrough with her fundraising. She was inspired by the Minnesota Lions clubs who raise money through pancake breakfasts and variety of other activities across the state. Collectively, the Minnesota Lions have given over eight million dollars to the department of Otolaryngology and about 24 million throughout the University. Their [the Lions’] regional fundraisers get pooled together and are then used for research projects that ultimately lead to NIH grants—and breakthroughs like the bionic eye. “I love that the largest donor I work with are the Lions, and that the money was raised collectively by communities. It makes me want to raise more and help do more too,” Palmieri says.

She works with potential donors who want to make a significant impact with their contributions, helping them find the right match at the University for their philanthropic goals. And she meets regularly with physicians and scientists to learn about their latest work and what they require to take their research to the next level. It’s a donor-centered approach to fundraising with a firsthand understanding of the needs of each physician and unit within the department. “When I am familiar with the science or what’s at stake, my sincerity and understanding helps build trust with potential funders. It’s critical to have the same trust and accountability with physicians and other care-providers.”

Palmieri serves as the link between donor and scientist, touting collaboration to meet funding needs at the University and broader medical issues in the world. She views her role as uniting two parts of a greater whole. Along the way, she brings great skill in learning new scientific concepts, translating them to nonscientists, and listening perceptively to people and their deepest desires and wishes.

“I like the idea of being this liaison between the academic community and the regular world. I’m the middle person who makes those connections and helps both parties see what’s possible if they work together,” Palmieri says. “It’s a lot of listening and conveying the excitement of an opportunity to donors when it seems to be a good match.”

Congratulations to our Minnesota Monthly’s Top Doctors Faculty

Meredith E. Adams
Merrill Biel
Holly Boyer
Manuela Fina
George “Shep” Goding
David Hamlar
Luke Jakubowski
Seth Janus
Stephanie Misono
Rick Odland
Derek Schmidt
Bevan Yueh
Nicole Kwon, PhD
Finding a new treatment for ear infections

Otitis media, an infection of the middle ear, affects more than 80 percent of children under the age of 3. The most common treatment is a 7- to 10-day course of oral antibiotics—a therapy that has contributed to bacterial resistance to antibiotics.

This is no small issue. Antibiotic resistance often leads to recurring and chronic ear infections for many children, which causes a multitude of problems such as speech delay and hearing loss.

Nicole Kwon, Ph.D., a researcher and assistant professor in the Department of Otolaryngology/Head and Neck Surgery, is developing a noninvasive and nonantibiotic treatment for otitis media using transtympanic blue light therapy.

Used extensively for cancer and localized infections, photodynamic light therapy is an antimicrobial approach that employs a photosensitizer and low-intensity visible light. It works to eradicate middle ear bacteria by generating reactive oxygen species. These reactive chemical species containing oxygen have an antimicrobial effect that fights off the infection-causing bacteria before they can mutate and continue thriving.

Ultimately, Kwon envisions creating a blue light source that fits onto an otoscope. Clinicians would put their otoscope in the patient’s ear and radiate it with light for less than 5 minutes. This light would pass through the tympanic membrane, or ear drum, into the middle ear to kill the infection-causing bacteria. She is collaborating with investigators from the Department of Electrical and Computer Engineering and the Medical Devices Center to design and develop a light emitting diode (LED) that can be utilized in transtympanic photodynamic therapy.

“Bacteria are effective as infectious pathogens because of their rapid doubling time, or regeneration time, and their ability to mutate,” Kwon says. “Bacteria can use these abilities to evade antibiotic therapy.”

Kwon, who has a doctorate in pharmacology and molecular medicine, has been working on this research since 2013 and joined the department in 2014. Currently, she is testing blue-light treatment on chinchillas using bioluminescent imaging. She aims to confirm her photodynamic therapy’s efficacy and safety in animal models before moving on to a translational study.

A native of South Korea, Kwon came to the University for her undergraduate degree in genetics and cell biology. She planned to go to medical school in the United States and become a physician scientist, but she couldn’t secure permanent residency.

Kwon returned to her country for her advanced degree and focused on teaching pharmacology and research for 16 years. She came back to the University four years ago and started working as a research associate in the Otopathology Laboratory, striving to build the preliminary research necessary to secure funding from the National Institutes of Health.

“Our Otopathology Laboratory has a long tradition of studying otitis media pathogenesis [disease],” Kwon says. “So it was natural to bring this insight into the lab and try to develop something that can circumvent antibiotic resistance.”

It will be a long road of research and testing to develop her light therapy for middle ear infections. But Kwon stays driven by her passion for scientific exploration.

“My hope is that I can contribute to the development of an effective, noninvasive, nonantibiotic treatment for otitis media,” she says. “I really enjoy my work—designing things and exploring new ideas and working hard. I’m grateful to get support from the department and that I have the opportunity to do this work.”
Mark Your Calendar

Friday, January 27, 2017
John Young Lecture
Shan Baker, MD
PWB 8-335

Saturday, January 28, 2017
Minnesota Academy of Otolaryngology
Minneapolis, MN
The Commons Hotel

March 30-April 1, 2017
Midwest Head & Neck Cancer Consortium
Minneapolis, MN
The Commons Hotel

April 26-30, 2017
COSM
San Diego, CA

Saturday, June 4, 2016
Lions D-Feet Walk
MN Landscape Arboretum
Chaska, MN

Friday, June 16, 2017
Department Graduation
Bruce Gantz, MD
Lions Research Building Conference Room
Banquet - North Oaks Golf Club