

# Editorial

## Special Issue: Research at Vanderbilt University

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It is a great honor to be asked to introduce a unique issue of the *Journal of the American Academy of Audiology*. This issue will highlight the current research efforts of the Vanderbilt Bill Wilkerson Center Department of Hearing and Speech Sciences, one of the oldest institutions in the field and among the most prolific. We are very grateful to Dr. James Jerger for being given the opportunity to “showcase” the research of our Center in this special Vanderbilt University issue of the *JAAA*.

The Bill Wilkerson Center opened humbly enough in 1951 in an old fraternity house that was located on the Vanderbilt University Campus. It was founded by Dr. Wesley Wilkerson, a local ENT, and named for his son, Bill, who was killed in the Battle of the Bulge during World War II. It was Dr. Wilkerson’s dream to create a place where children with hearing loss could come to obtain an education that would prepare them for life. He also wanted to bring young professionals into the field and further our investigative knowledge. To this end, Dr. Wilkerson partnered with Vanderbilt University in the development of a research and training program for audiologists and speech-language pathologists.

Dr. Freeman McConnell was the first director of the Bill Wilkerson Center and oversaw the construction of a more permanent, state of the art building in 1958. In July of 2005, the Vanderbilt Bill Wilkerson Center opened its most recent incarnation, a ten-story building on the campus of the Vanderbilt Medical Center. This center contains our didactic and clinical training programs, a National Center for Childhood Deafness and Family Communication, our School for the Deaf, and our new graduate program to train deaf educators. It is in this structure that our tripartite mission of teaching, clinical care, and research is carried out.

The first class of audiologists graduated in 1953. Since that time, the Department of Hearing and Speech Sciences has conferred graduate degrees to hundreds of audiologists, many of whom have been, or continue to be, leaders in our profession. These graduates have included Drs. Earl Harford, Fred H. Bess, Richard Wilson, Judith Gravel, Anne Marie Tharpe, and Brad Stach.

The first manuscript, authored by Dr. Anne Marie Tharpe and her colleagues, provides a review of their research in the area of visual attention in both normal hearing and congenitally deafened children and adults wearing hearing aids and cochlear implants. Their findings support the interpretation that deaf individuals, who would otherwise use hearing to monitor their peripheral environments, compensate for hearing loss by reallocating visual attentional reserves for awareness of activity in the environment.

The manuscript authored by Dr. Todd Ricketts and his colleagues describes their assessment of the quality of feedback cancellation algorithms in commercially available hearing aids. They note considerable variability between instruments in the amount of gain achieved before feedback occurs. Further, measurements made with KEMAR may not be generalizable to actual performance on the patient.

In the next manuscript, Dr. Gus Mueller and his colleagues present data, obtained from “trainable” hearing aids, that suggests that beginning gain levels have an influence on future use gain.

Dr. Troy Hackett reports the efforts of his laboratory in defining the extent of the auditory cortex. Among other things, the author reports multiple regions where tonotopicity occurs. The reader may be surprised by the extent of auditory sensitive brain regions.

The following paper, by Dr. Daniel Polley and his colleagues, provides an excellent review of the functional organization of auditory and multisensory (i.e., auditory-visual) information processing in three sensory brain structures. They then present a body of work supporting the concept that experience influences the operations performed by the neural circuitry in these regions.

The final paper, authored by Jacobson and colleagues, describes our observations from a cohort of 185 patients referred for unsteadiness to our Falls Risk Assessment Clinic. We report that more than 70% of patients referred for assessment of falls risk may have previously undiagnosed vestibular system impairments. This previously unreported finding may have implications for both assessment and management of the unsteady and falls-prone elderly.

Dr. Fred Bess, the associate director of the Vanderbilt Bill Wilkerson Center for Otolaryngology and Communication Sciences, has served as the chairman of the Department of Hearing and Speech Sciences for over 30 years and has presided over much of its growth. In January 2003, he invited me to join the faculty of the Department of Hearing and Speech Sciences. Part of the attraction of Vanderbilt to me was its international reputation and the potential to work with a group of outstanding researcher/scientist colleagues. Their broad-based interests spanned clinical audiology, vestibular clinical neurodiagnostics, signal processing in hearing technologies, psychoacoustics, neurophysiology, and more. This special issue attests to the diversity of these interests.

Gary P. Jacobson  
Guest Editor

Photograph courtesy of Anne Rayner.

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