Clinical and Research Contributions to CAPD

Jennifer Shinn, PhD is the Chief of Audiology and Director of Newborn Hearing at the University of Kentucky Medical Center. Congratulations are in order as she was recently promoted to full professor in the Department of Otolaryngology. Dr. Shinn was appointed Chief and Director of Audiology in 2005 and continues in this position. In addition, she teaches residents and mentors research projects. She is nationally well known in her field of audiology and serves on many committees for the University of Kentucky, as well as the American Academy of Audiology and other regional and national societies. Dr. Shinn has numerous national and international presentations on the assessment, diagnosis, and management of auditory processing, including one in June 2021 at the HeAL Conference in Italy. This presentation titled, Hormones and Hearing: Auditory Processing in Women, continues to bridge new areas of research on auditory processing. This well-deserved recognition is especially significant to the Neuroaudiology Newsletter readership, as Dr. Shinn has made important contributions to CAPD research and clinical practice.

AUDIOLOGY TRIVIA

ANSWERS ON THE LAST PAGE

1) The medial geniculate body (MGB) is located in what major structure of the brain?
   a) Pons, b) Midbrain, c) Thalamus, d) Cortex

2) True or False. Hearing loss occurs twice as often in individuals with diabetes compared to those that don’t (age-matched).
Clinical and Research Contributions to CAPD

Other notable mentions for audiology researchers who achieved full professor positions during their career include Jennifer McCullagh, and Pete Schiefele. Jennifer McCullagh, AuD, PhD, CCC-A (pictured below-left), achieved full Professor and Chairperson positions in the Communication Disorders Department at Southern Connecticut State University. Dr. McCullagh’s research interests include electrophysiology as well as central auditory processing disorders. She has given numerous presentations on topics related to auditory processing and published on topics related to auditory training. Further, she organized a top-notch auditory processing clinic at Southern Connecticut.

Pete Schiefele, PhD, LCDR, USN (pictured below-right), earned Professorship in the Department of Communication Sciences and Disorders at the University of Cincinnati. He is also the Director of the FETCH LAB. Dr. Scheifele is well known for his work in animal audiology and the originator of the FETCH lab as well as developing a curriculum in animal audiology. Dr. Scheifele is a prolific presenter at national and international meetings.

These three professor/researchers that are featured in this newsletter are all past doctoral students of Dr. Frank Musiek. Drs. Shinn, McCullagh, and Scheifele were members of the Neuroaudiology Lab at the University of Connecticut. Congratulations to these successful professors and their contributions to auditory processing research!
CENTRAL AUDITORY PROCESSING
DISORDERS CORNER

Topic: Consideration of the P1 Evoked Potential (EP)

One of the greatest challenges in audiology is the evaluation of the auditory cortex integrity in young children. Evoked potentials are often considered in this population, however the use and interest in EPs by the audiological community has waned in recent years. This is indeed unfortunate in many respects, but regarding EPs and evaluating young children, it is of special concern. In the last decade or so, the P1 EP has become attractive and quite well-documented in the evaluation of cochlear implantation in young children. As part of these studies, Anu Sharma and colleagues compiled valuable data on P1 in normally developing children. This has provided normative data for the P1 in pediatric population, which in-turn, has opened the door for wider clinical use of the P1 EP.

It is fair to say that P1 EPs in young children seem robust and fairly consistent. For example, the P1 over the first 2 years of life shows increases in amplitude from around 2 to often more than 5 microvolts! At this amplitude, the P1 waveform is relatively easy to observe and track. In preschool children, the P1 often appears as a dominant EP waveform. Maturation to adult values of the P1 may not occur until well into the teenage years. As the P1 matures post early childhood, the amplitude actually decreases as the N1 and P2 EP waveforms undergo morphological changes. Hence, in young children, the P1 may have real advantages over other late potential waveforms.

Therefore, our message here is for audiologists to consider the P1 EP in the evaluate of auditory cortex integrity, especially in preschool children. If your clinic or practice does not include the use of “late” or “cortical” EPs, a referral to a facility that has the capability may be needed.
CAPD Corner Suggested Readings

Topic: Considerations of the P1 Evoked Potential


Newest Member of the Neuroaudiology Family

On June 4, 2021, Alyssa Davidson, PhD, AuD, editor of this newsletter and postdoctoral researcher at Northwestern University, welcomed to the world the newest member of the Neuroaudiology family. Annika has already contributed to research by participating in a long-term study evaluating the mismatch negativity (MMN), as can be seen in the picture on the left. She also is an advocate for good hearing health by protecting her ears with her new hearing protection (right picture)!
Past Students, Future Solutions

A recent graduate of the Neuroaudiology Lab is making great progress in their clinical audiology career. Aaron Whiteley, AuD, CCC-A along with his wife Leslie Whiteley, MS, CCC-SLP, have opened their own private practice with an innovative approach to hearing health care. Whiteley and Whiteley audiology (www.wwaudiology.com) provides a range of services to their patients and aim to create individualized aural rehabilitation plans in a comprehensive way. This family-run practice is a great model for audiology practices moving forward, using evidence-based best practice to deliver the highest standard of care. Congratulations Whiteley and Whiteley Audiology, we look forward to hearing about your business success!

Other members of the University of Arizona Neuroaudiology Lab are also off to do big things and make their own contributions. Carrie Clancy will begin her audiology externship at Banner University Medical Center and Children’s Clinics for Rehabilitative Services while Maggie Schefer and Jillian Bushor will start the beginnings of their career at the Center for Neurosciences. Congratulations and we all look forward to hearing about your future success!

Interesting Reads on Neuroaudiology and CAPD


AUDIOLOGY TRIVIA ANSWERS
1) The MGB is located in the (C) thalamus.
2) True! Hearing loss does occur twice as often in age-matched individuals with diabetes.