HAPPY NEW YEAR
“DAMNIT JIM... WHY DO THEY CALL THE SPEAKER A RECEIVER? IT CONFUSES ME!”
-CAPTAIN JAMES T. KIRK

“Hindsight is 20/20” they say. Yet, here we are now, not needing to think back on things after they happened, because 2020 is the present and future!

January is the time for New Year’s resolutions. This will be the year that manuscript you’ve been working on goes in, or the grant you’ve been dedicating hours to gets submitted, or maybe it’s the year for graduation!

We are all embarking on this new decade together and it’s an exciting time to make plans for how the year will go.

From the University of Arizona’s Neuroaudiology Lab, we wish you all a Happy New Year!

Pictured above from left: Frank Musiek, Carrie Clancy, Alyssa Everett, Bryan Wong, Jillian Bushor, Maggie Schefer, Julia Bak, and Barrett St. George.

AUDIOLOGY TRIVIA
TEST YOUR KNOWLEDGE!
ANSWERS ON THE LAST PAGE

1) The P300 reaches its shortest latency at which of the following age ranges:
a) 6-8 years. b) 10-12 years. c) 14-17 years. d) 18-24 years.

2) Which of the following composed the classic paper on central masking effects?
a) Zwislocki. b) Feldman. c) Stevens. d) Wever.

3) Over the past 3-4 decades, Ken Hugdahl has been a research leader in which of the following areas:
a) influence on otitis media on auditory development. b) ECOG. c) dichotic listening. d) MMN
PALM SPRINGS HEARING SEMINAR CONFERENCE

The seminar held in Palm Springs, CA on December 6-7, 2019, was the 40th anniversary of the Palm Springs Hearing Seminars. The purpose was to gather audiologists, otolaryngologists, hearing instrument specialists, researchers, and manufacturers under one roof to discuss basic hearing research, clinical research, and practice management topics relevant to dispensing practitioners of hearing healthcare.

This conference provided a forum for both formal and informal discussion of topics important to the attendees, as well as the faculty. Typical for this long-standing continuing education program, an outstanding faculty was assembled to discuss cutting edge basic and clinical research.

The following is a list of faculty and topics that portrayed the balance of science and practice in this informative meeting.

ALANCHENG, MD
Stanford U-Development of the Inner Ear: What can we learn from it? & Hair Cell Regeneration: Does function follow form?

KELLY HARRIS, PHD
Medical U of South Carolina-Developing Electrophysiological Methods for Identifying Pathophysiology of Human Age-Related Hearing Loss, & Cortical Plasticity with Age and Hearing Loss

JACQUE GEORGESON, AUD
U of the Pacific-Educational Programs in Hearing Healthcare

FRANK MUSIEK, PHD
U of Arizona-Auditory Hallucinations: An Emerging Audiological Opportunity. & Status of Audiology in the USA: A View from Diagnostics

STEVE RAUCH, MD
Harvard U-Vestibular Migraine: What the Practitioner Needs to Know

ARTHUR BOOTHROYD, PHD
San Diego State U-Zone of Acceptable Listening, & Self-Fitting Hearing Aids

ALLEN RYAN, PHD
U of California at San Diego-The Life, Death, and Afterlife of the Hair Cell & Finding Needles in a Haystack: Discovering Rare Peptides that Mediate Active Drug Delivery Across the TM.

JONIDOHERTY, MD, PHD
U of Southern California-Update on Ototoxicity

MALCOM SLANEY, PHD
Google Inc.-Understanding all the Worlds of Sounds at Google

RUPA BALACHANDRAN, PHD
U of the Pacific-Establishing an OTC Model in your Clinic

MARK A PARKER, PHD
Tufts U School of Medicine-Seminar Director

DID YOU KNOW??

Patients report varying levels of auditory processing abilities despite having a similar peripheral hearing loss and age.
CENTRAL AUDITORY PROCESSING DISORDERS CORNER

Emma Holmes and Tim Griffiths have recently published an article titled, "'Normal' hearing thresholds and fundamental auditory grouping processes predict difficulties with speech-in-noise perception," which is highly worth the read. The article can be accessed here: https://www.nature.com/articles/s41598-019-53353-5.pdf

This article reveals that difficulty hearing in noise is attributable to both peripheral and central processes. It states further, "Crucially, speech-in-noise deficits are better assessed by measuring central (grouping) processes alongside audiometric thresholds."

Related to this finding is our view that other test procedures (many in commonly used central auditory test batteries) that are better than often used speech-in-noise measures for detecting auditory deficits related to this problem.

The idea that normal central auditory processing depends on both bottom-up and top-down auditory and cognitive functions is a fundamental consideration. Many tests commonly employed in the clinic require, at least to some degree, bottom-up and top-down processes.

ASHA CONVENTION, 2019

The annual ASHA Convention took place in Orlando, FL from November 20-23, 2019. In attendance from U of Arizona’s audiology faculty were Frank Musiek, Barbara Cone, Nicole Marrone, and Mark DeRuiter. On the student side, PhD Students Bryan Wong and Alyssa Everett (pictured below) also attended as ARTA awardees.

OUTSTANDING ACHIEVEMENT!

Dr. DeRuiter received an Excellence Award: The Dorothy Dreyer Award for Volunteerism.

Congrats Dr. DeRuiter!

Pictured right: Shari Robertson [ASHA president] and Mark DeRuiter
TUNING FORKS CLINICAL APPLICATIONS: WHY AND HOW TO USE

Tuning fork tests can be useful for clinicians because it is an effective and simple way to assess a patient’s hearing sensitivity for pure tones. Tuning forks are a measure of bone conduction and can be used to determine early diagnostic information when an audiometer is not available.

There are four main types of tuning fork tests:

1) The Rinne
2) The Bing
3) The Weber
4) The Schwabach

The Rinne tuning fork test is used to diagnose a conductive hearing loss. The test compares the results from air conduction and bone conduction methods.

To conduct the Rinne air conduction method, a 512 Hz vibrating tuning fork is held near the external auditory canal, or mastoid bone for bone conduction.

If the sound is perceived louder near the external auditory canal, there is no conductive component present. If the sound is not heard at all, this indicates that there is a conductive hearing loss.

The Bing tuning fork test is also used to diagnose a conductive hearing loss. Again, a 512 Hz vibrating tuning fork is used. For this test, the tuning fork is held only against the mastoid with and without the tragus closing off the ear canal.

If the patient reports a change in sound, this indicates that there is no conductive hearing loss present.

The Weber tuning fork test is used to diagnose a unilateral conductive and sensorineural loss.

Using a 512 Hz vibrating tuning fork, position it on the vertex, most commonly in the middle of the forehead.

The patient should hear the sound equally on both sides.

If the patient has a conductive component, the test tone will lateralize to the poorer ear, or to the better ear if the loss is sensorineural.

The Schwabach test distinguishes a conductive hearing loss from a sensorineural loss.

This test compares how long the sound was heard by the patient and examiner. A 512 Hz vibrating tuning fork is held against the mastoid and the patient is asked to indicate when the tone is no longer heard.

A sensorineural loss is present if the patient stops hearing the tone before the examiner (assuming the examiner has normal hearing). A conductive loss is present if the patient hears it longer than the examiner (again, assuming normal hearing).

PATHWAYS MEETING AT AAA 2020 CONFERENCE

Keep an eye out for information on the Annual Pathways CAPD meeting at the 2020 American Academy of Audiology Conference in New Orleans! A business and interesting educational meeting is now being planned. Mark your calendars to plan to attend!

AUDIOLOGY TRIVIA ANSWERS

1) The P300 reaches its shortest latency at (D) 18-24 years.
2) (A) Zwislocki composed the classic paper on central masking effects?
3) Over the past 3-4 decades, Ken Hugdahl has been a research leader in (C) dichotic listening.

PAST NEWSLETTERS: All past newsletter can be found at: musiek.faculty.arizona.edu