Academy Research Conference 2016 Summary

What a great turn out at this year’s Academy Research Conference (ARC)! ARC is a specialized one-day conference that incorporates current research into clinical practice lead by a panel of top researchers and clinicians. Each year the topics differ to review various areas of auditory processing and rehabilitation. There were 260 plus people in attendance from all over the world including clinicians, researchers, students, and professors. 2016’s annual ARC was focused on Central Auditory Processing Disorders (CAPD) Evaluation and Treatment held at the Sheraton in Downtown Phoenix, AZ on April 13th. This was a great topic and very timely for the field of audiology. Audiology is no longer just about the ears, it’s about the pathways and the brain too! CAPD is not well known due to the variability in its presentation; however, as shown from the large attendance, this subfield of audiology is becoming quite the hot topic!

Dr. Frank Musiek, an ARC chair, introduced the presenters who are all well-known in the field of audiology.

Holly Fitch wowed us with her contribution of animal research. She focused on animal models with neurodevelopment disruptions and associated acoustic processing disorders and how her findings related to determining the neurologic risk factors in infants for improved early intervention. Stephen Lomber brought to our attention the plasticity that the auditory cortex has following hearing loss using cat models. Kathy Pichora-Fuller discussed the auditory and cognitive processing in older adults and how an undiagnosed auditory impairment can negatively affect quality of life. Jos Eggermont opened our eyes to the detrimental factors long-term non-traumatic noise exposure can have on the organization of the brain and how this could be a cause of CAPD. Jeffrey Weihing described Dichotic Interaural Intensity Difference (DIID), the upcoming auditory training program for those with CAPD. Harvey Dillon concluded the presentations with remediation procedures for those with CAPD and more specifically, those with spatial processing disorders. He introduced two training software to help diagnose auditory problems and use interactive games to improve performance in areas that they have deficits.
Interview with Attendees from ARC

Andrew Demarco (AD), University of Arizona
Barrett St. George (BS), University of Arizona
Diane Cheek (DC), University of Arizona
Renata Filippini (RF), University of São Paulo, Brazil

1) What was your favorite part about ARC?
RF: I was really pleased that the lectures covered basic and clinical research, and that it had a great transition from the animal to humans’ studies.
DC: The diversity among the presentation topics which demonstrated the complexity of CAPD.

2) What were your thoughts on the poster session?
DC: It was great! The interaction with fellow ARC attendees served as an excellent vehicle to exchange ideas, receive substantial feedback, and to meet fellow professionals in the field.
AD: The wide range of topics covered was impressive which speaks to the importance of CAPD!
BS: It was a great opportunity to speak with different researchers and entertain collaborative projects.

3) What made you attend this ARC conference related to CAPD?
RF: I have a 10 year career studying CAPD, and the conference had an amazing line-up of well-known and respected researchers in the field that could not be missed.
DC: I see the future of our field needing to be well-versed in centrally-related topics which is why I attended this conference. Having a great command of knowledge of CAPD will foster greater critical thinking on the topic, advance CAPD research efforts, and enable us to better serve our patients.
AD: I’m interested in CAPD and how auditory input is processed cortically and interfaces with both speech/language and non-linguistic cognitive domains.
BS: This is a primary area of interest for me within the field of audiology.

4) What additional thoughts do you have about this conference?
DC: If I could have my way, I’d make the annual ARC topic always CAPD-related!
BS: The wine and cheese reception was a nice opportunity for networking. I enjoyed the level of professionalism and knowledge at the conference.
AD: The focus on a very specific topic over a sustained period of time was awesome, and more useful in my opinion than a series of talks on scattered topics as you usually find at conferences.
RF: The people greeting us upon arrival were really nice and helpful. I especially liked having lectures and posters in the same room, it does facilitate checking out the posters, but, I feel like I didn’t have the time to both talk to people and check the posters during breaks.
Ira J. Hirsh is considered a major innovator in the fields of audiology and Deaf education. Born February 22, 1922, in New York, Hirsh received his Bachelor of Arts from New York State College for Teachers in 1942. From there he went on to Northwestern University’s School of Speech where he completed a Masters of Arts. From 1944-1946, Hirsh served as a lieutenant in the Air Force as a teacher in the communications school and in aural rehabilitation. After leaving the Air Force he went on to earn his doctorate from Harvard University Psychoacoustic Lab, and in 1951 he accepted a research appointment at the Central Institute for the Deaf (CID) as well as an assistant professorship of psychology in Arts and Science at Washington University (WU). He served as the director of research at CID from 1965-1983 while maintaining an eminent career at WU as a professor of psychology where he also served as dean of the faculty of Arts and Sciences from 1969-1973 and chair of the department of Psychology from 1983-1987. He was named emeritus professor in 1992.

With over 100 published articles, his ideas paved the road to the speech and hearing sciences we know today.

Almost a quarter of Hirsh’s published articles had clinical ramifications, making his work influential on both research and clinical areas of speech and audiology. One of Hirsh’s greatest accomplishments was the publication of his ground-breaking book “The Measurement of Hearing”, in 1952, early on in his career. Prior to its publication, there were about 5 prominent texts written on the subjects of Deafness and audiometry. Dr. Hirsh writes the purpose of his classic text was “… intended to be used as a reference by those who are engaged in measuring and treating disordered hearing…” In the current version of the “Handbook of Clinical Audiology” by Katz, Hirsh still remains one of the most cited authors in reference to many different areas of clinical audiology including: fundamental properties of auditory masking, theoretical aspects of bone conduction and the masking level difference and contributions to auditory training. Dr. Hirsh is well-known for his contributions in temporal processing and temporal order. More than 50 years after development, the CID W22 speech materials spoken by Dr. Hirsh are still used to assess speech hearing in the clinic. Another area that Hirsh had a major impact on was in Deaf education at CID. Prior to his arrival, teaching Deaf children primarily focused on lip reading, and tactile perception in conjunction with imitative exercises in speech sound production. Following models of Max Goldstein and Dennis Fry, Hirsh used amplified speech as the primary tool to develop oral language in those children who were pre-lingually deaf. Ira Hirsh died January 12, 2010 at age 87 years, his contributions in the field of audiology and Deaf education continue to have a profound impact on how clinicians practice today.

NOTEWORTHY!

The new code for CAPD, H93.25, is used for both acquired auditory processing disorder and CAPD for which there is no known etiology (i.e. congenital, developmental, idiopathic, etc.). –More on these billing codes and new classifications of CAPD in upcoming newsletters.
Upcoming Conferences

2016 International Hemispherectomy Conference and Family Reunion
When and Where? July 8-July 10, 2016 at the Omni Interlocken Resort in Broomfield, Colorado. Why? This conference will include a lecture from Dr. Frank Musiek on July 9th discussing “Hearing after Hemispherectomy: Why a Single Hemisphere has Trouble Processing Sounds and Words.”

XXXIII World Congress of Audiology
When and Where? September 18-22, 2016 at the Sheraton Wall Centre in Vancouver, Canada. Who? Members of the Neuroaudiology Lab have an accepted poster to be presented at this conference: Barrett St. George, Andrew DeMarco, and Frank Musiek, Title: Modern Views on the Anatomy of the Planum Temporale Why? On September 20, 2016, there will be CAPD featured sessions with well-known speakers: Jos Eggermont, Frank Musiek, and Nina Kraus.

LADS-Lectures in Auditory Disorders

On April 19th, Robert Sweetow joined us at The University of Arizona to discuss Tinnitus Patient Management: What you need to know now, and what you will need to know when you’re in practice. This presentation had a great turn out of faculty, students, and other professionals. Below is Robert Sweetow pictured with some of the audience! Thank you to the Royal Arch Research Assistance (RARA) and the Oak Hill Foundation for support.

Nicole Denny, 2nd year audiology student, “Dr. Sweetow provided an excellent clinical perspective on how to create and individualized tinnitus management plan using patient centered care.”

Angela Yung, 2nd year audiology student, “Dr. Sweetow was a knowledgeable and engaging lecturer. It was very interesting to hear about his research and experiences.”
Student Presentations at the American Academy of Audiology

At this year’s American Academy of Audiology conference, many of the presenters at the poster session were from The University of Arizona. Pictured below are posters from Dr. Musiek’s neuroaudiology lab representing just a portion of The U of A’s contribution.

Above from left: Alyssa Everett, BS., Nicole Denny, BA., Eliane Schochat, PhD., Frank Musiek, PhD., and Aline Albuquerque Morais, MS.
Below from left: Andrew DeMarco, MS., Barrett St. George, BA., Renata Filippini, PhD., and Diane Cheek, BA.

Did you know?....

Palinacousis is an auditory illusion of hearing an acoustic event well after it has stopped. It is generally considered a central auditory disorder!

Did you know?....

Electrical stimulus along the lateral aspect of the superior temporal gyrus has been interoperatively found to elicit auditory hallucinations.
Recent Articles of Interest

Diagnosis of Amblyaudia in Children Referred for Auditory Processing Assessment-2016
D. Moncrieff, W. Keith, M. Abramson, & A. Swann
Journal: International Journal of Audiology

Active Drumming Experience Increases Infants’ Sensitivity to Audiovisual Synchrony during Observed Drumming Actions-2015
S. A. Gerson, A. Schiavio, R. Timmers, & S. Hunnius
Journal: PLOS One

Past Neuroaudiology Newsletters/Other Important Neuroaudiology Sites

- http://musiek.faculty.arizona.edu/