

# Neuroaudiology Newsletter

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## *International Evoked Response Study Group Meeting, 2017*



Above pictured from left: J. Hall, P. Jasterboff, F. Musiek, and S. Hatzopoulos

The IERSG meeting on 2017 was held in Warsaw, Poland on May 21-25. The University of Arizona was well represented. Barbara Cone contributed three presentations, including *Variability of medial olivocochlear reflex across click and distortion product evoked otoacoustic emissions* (co-authors: Kayla Ichiba, Siena Schoelin, Alireza Pourjavid), *Employing the acoustic change complex for vowel discrimination* (co-author: Diane Cheek) and *Using cortical evoked potentials to predict speech feature perception in infants* (co-authors: Spencer Smith and Diane Cheek). **Frank Musiek** provided one of the two keynote lectures for the program entitled, *The middle latency response (MLR) and disorders of the central nervous system* (co-author Bryan Wong) and also contributed to the Otolaryngology program special session with a presentation on the **Clinical application of the Gaps in Noise (GIN) Test**. The IERSG program, which is held every two years, provided research presentations on essentially all auditory evoked potentials from ECOG to the Cortical evoked responses. In addition, papers on wide band acoustic immittance, VEMPs, imaging, and OAEs were presented. Both poster and platform presentations were utilized to convey recent research findings at the meeting. The next IERSG meeting will be in 2019 in Sydney, Australia.

## TEST YOUR AUDIOLOGY TRIVIA KNOWLEDGE

1) This individual was the lead author on one of the first published articles in 1977, relating the sensitivity/specificity of the ABR for acoustic tumors. A) Bob Galambos, B) Weldon Selters, C) Jim Jerger, D) Jay Hall

2) In a survey in 2008, published in 2011 (Kochkin, Tyler, and Born) estimated that the prevalence of tinnitus in the US was \_\_\_ million. A) 10, B) 20, C) 30

Answers on page 3 of this newsletter.

## ***International Conference on Auditory Cortex (ICAC)***

Many of you who read our newsletter may not be familiar with the **International Conference on Auditory Cortex**. It is a relatively new conference with its first meeting held in 2003. This is the first year since then that it will take place in North America. The 2017 conference site is Banff, Alberta Canada on September 10 through the 15th. The focus of the meeting is to relay current research devoted to the auditory cortex.

Though there will be a good dose of presentations on the anatomy and physiology of auditory cortex there will also be information on mechanisms that relate to perception and cognition. This year it is estimated that 250 scientists will attend representing a wide variety of interests and backgrounds. In addition, there will be 4 keynote addresses, 21 invited talks and 21 presentations from graduate and post-doctoral students.

The ICAC may be especially relevant for those interested in **NeuroAudiology** in general and in **CAPD** specifically. Much of the basic science relevant to higher order processing is often presented at these meetings. In addition, background information on key anatomical and physiological aspects of the auditory cortex will be available from both animal and human research perspectives. For more information go to: [auditorycortex.org](http://auditorycortex.org).

### *Did you know?....*

Auditory hallucinations of neurologic origin can be localized to one ear as reported by Baurier and Tuca in 1996. Usually it is difficult to localize the hallucination and many patients report them as “in the head” or don’t localize the hallucination at all.

Baurier and Tuca also report a patient with musical hallucinations that appeared to have a neurological brainstem origin. Though there are a number of reports with neurological auditory hallucination associated with brainstem involvement this occurrence is far less common than cortically based auditory hallucinations.

### *Did you know?....*

As more information becomes available from recent studies, it has become apparent that it is important to test hearing abilities at supra threshold levels. The Liberman and Kujawa 2009 article related that auditory nerve function may be compromised from noise exposure resulting in TTS but with no effect on hearing thresholds. However, high level ABR results showed a reduction in Wave I amplitude in these exposed animals. This “new” research has pointed to the need of supra threshold testing. Interestingly, Robert Efron, a neurologist and outstanding auditory researcher back in 1985 also discussed the importance of supra threshold testing in diagnostic assessment and how it was drastically different from threshold testing. Efron related much of the same logic used now in current studies. However, his writings received little attention back in the mid-1980s!

## Major Conferences

Conference	Date and Location	Dr. Musiek's Presentation
International Evoked Response Study Group	May 21-25: Warsaw, Poland	The Middle latency response (MLR) and disorders of the central nervous system
Poland Otolaryngology Society	May 26-28: Warsaw, Poland	Clinical application of the Gaps in Noise (GIN) test
International Conference on Auditory Cortex	September 10-15: Banff, Alberta, Canada	Is hidden hearing loss really hidden?

### Past Neuroaudiology Newsletters

All past newsletters can be found at:  
<http://musiek.faculty.arizona.edu/>

### Recent Article of Interest

**Practical Guidelines to Minimise Language and Cognitive Confounds in the Diagnosis of CAPD: A Brief Tutorial;** *International Journal of Audiology*

G. Chermak, D. Bamiou, V. Iliadou, & F. Musiek

### Recent Article of Interest

**Effect of Stress on Auditory Processing: A Systematic Review of Human Studies;** *Neurosciences*

Z. Jafari, B. Kolb, & M. Mohajerani

## Audiology Trivia Answers

- 1) B: Weldon Selters
- 2) C: 30million

## **Neuroaudiology Lab Picture!**



**Above is the 2017 Neuroaudiology Lab group at the  
University of Arizona.**

**From left: Special guest, Dr. O'neil Guthrie, Aaron  
Whiteley, Athena Luong, Bryan Wong, Frank Musiek,  
Nicole Denny, Barrett St. George, Alyssa Everett, and  
Liza Clark**