

Neuroaudiology Newsletter

Writer/Editor:
Alyssa Everett, B.S.

Contributor/Supervisor:
Frank E. Musiek, Ph.D.

Publication Date:
March 1, 2017

Lectures in Auditory Disorders and Sciences (LADS)

LADS is a continuing education program sponsored by the Neuroaudiology Lab, Department of Speech, Language, and Hearing Sciences at the University of Arizona with generous support from the Little Oak Hill Foundation and the Royal Arch masons. LADS started in 2002 at the University of Connecticut with the goal of enhancing knowledge in hearing and balance as well as their related disorders. The LADS program has continued at the University of Arizona and is conducted in the spring of each year, providing a wide range of topics in or related to audiology and the central auditory system.



This year, on April 12, 2017 from 6:30-7:30, Dr. Stephen Lomber (pictured left) will be joining us at the University of Arizona and will be presenting on the Auditory Cortex Plasticity Following Hearing Loss.

Dr. Stephen G. Lomber, Ph.D. is a professor of Physiology, Psychology, and Neuroscience at the University of Western Ontario. Dr. Lomber holds degrees in Neuroscience from the University of Rochester, B.S., and the Boston University of School of Medicine, Ph.D. He is the Canada Research Chair in Brain Plasticity and Development and focuses on how the brain changes after hearing loss. Dr. Lomber also directs the Cerebral Systems Laboratory where psychophysics, neuroanatomical techniques, electrophysiological recording, and functional imaging are used to examine processing in the auditory cortex.

For more information, please contact Frank Musiek at fmusiek@email.arizona.edu

CAPD Boot Camp

The first CAPD boot camp at the University of Arizona (Speech Language and Hearing Sciences Department) was held on January 4 and 5, 2017. Seven previous boot camps were held at the University of Connecticut starting in 2007. The faculty for this meeting included Jane Baran, Ph.D. University of Massachusetts, Erick Gallun, Ph.D., VA Hospital and University of Oregon Health Science Center, Mike Webb, M.A., EAR- Central, Hereford, AZ., and University of Arizona doctoral students Barrett St. George and Diane Cheek and Frank Musiek, Ph.D. University of Arizona.

The participants included experienced, practicing audiologists as well as graduate students interested in CAPD. The program organization was in part, generously supported by the Royal Arch Research Assistance (RARA).

The program was an intense exposure to the practical aspects of CAPD that focused not only on didactic lecture, but also “hands on” lab experience on the administration of central auditory test procedures. Sessions permitted participants to present and discuss their challenging cases with the faculty. In addition, current professional issues in CAPD were presented along with selected current clinical research. Presentations and discussions were aimed at both diagnostic and management issues in clinical settings. New CAPD information on blast injury, dichotic auditory training, use of hearing aids and dyslexia were some of the presentations that drew the most discussion and interest.

2017 Pathways Meeting Update

What: Pathways annual meeting at the American Academy of Audiology, AudiologyNOW!

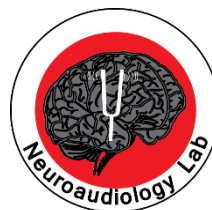


Where/When: This meeting will take place at the American Academy of Audiology annual conference, AudiologyNOW! in Indianapolis, Indiana. Thursday April 6th at 1pm in Room 134 at the Indianapolis Convention Center.

Why: To discuss issues in CAPD. The newly formed educational segment will provide presentations by Dr. Schochat and Dr. Filippini!

Excellence in Student Research

The American Academy of Audiology’s annual AudiologyNOW! conference will be held on April 5-8, 2017 at the Indiana Convention Center and Lucas Oil Stadium in Indianapolis, Indiana.



Members of the Neuroaudiology Lab, **Bryan Wong and Renata Filippini** have been nominated for the **James and Susan Jerger Award for Excellence in Student Research!** The research they are presenting is titled, Auditory Temporal Tests: An Indicator of CANS Pathology. Come show you support on April 6 and 7th from 130-230.

Did you know?....

The efferent auditory system is also known as the descending auditory system and, as the centrifugal auditory system.

TEST YOUR AUDIOLOGY TRIVIA KNOWLEDGE

1) In normal hearers, the Pb Max for the words on the NU6 lists is reached at:

- a) 40 dB SL
- b) 25 dB SL
- c) 32 dB SL
- d) 36 dB SL

2) The 1st edition of “Audiological Assessment” was published in 1971. Who was the editor of this book?

- a) Raymond Carhart
- b) Wayne Olsen
- c) Darrell Rose
- d) Chuck Berlin

Find out how you did! Answers on the final page of this newsletter.

Upcoming Conferences

Alyssa Everett, Nicole Denny, Barrett St. George, Bryan Wong, Diane Cheek, and Renata Filippini will be presenting their research work conducted in Dr. Frank Musiek's Neuroaudiology lab at the following audiology conferences:

American Auditory Society



Scottsdale, Arizona

-Alyssa Everett, Nicole Denny, Frank Musiek presenting, "Variations in the Duration Pattern Test"

-Bryan Wong, Renata Filippini, Frank Musiek presenting, "Auditory Temporal Processing Tests: An Indicator of CANS Pathology"

-Barrett St George, Andrew Demarco, Frank Musiek presenting, "Modern Views on the Anatomy of Planum Temporale"

-Renata Filippini, Bryan Wong, Frank Musiek presenting, "Diagnostic Accuracy of the GIN Test for Neuro-auditory Lesions"

American Academy of Audiology, AudiologyNOW!



Indianapolis, Indiana

-Alyssa Everett, Nicole Denny, Frank Musiek presenting, "Variations in the Duration Pattern Test"

-Robert Ivy, Diane Cheek, Frank Musiek presenting, "ABR Heralds the Initial Diagnosis of Neurofibromatosis Type II"

-Barrett St George, Andrew Demarco, Frank Musiek presenting, "Modern Views on the Anatomy of Planum Temporale"

-Bryan Wong, Renata Filippini, Frank Musiek presenting, "Auditory Temporal Processing Tests: An Indicator of CANS Pathology"

-Renata Filippini, Bryan Wong, Frank Musiek presenting, "Diagnostic Accuracy of the GIN Test for Neuro-auditory Lesions"

Did you know?....

Many of us think back to the amazing studies done many years ago, by the great Wilder Penfield who recorded directly from the auditory cortex of humans during neurosurgery. Direct recordings from auditory cortex are presently being carried out at several places here in the United States. One of these locations is Johns Hopkins University where an audiologist, Dana Boatman, is involved in these complex studies.

Perspectives on the Pure-tone Audiogram

Keep an eye out for this upcoming article of interest to be published soon in the Journal of American Academy of Audiology! The focus is a careful and extensive analysis of the utilization of the pure-tone audiogram in cochlear, auditory nerve, auditory brainstem and auditory cortex disorders.

Presentations by Dr. Musiek

Invited Lectures	Date and Location	Lecture Title
Speech, Language, and Hearing Homecoming Lecture	October 29: Tucson, Arizona	A 3-D Tour of the Auditory Brain
Inaugural Address Grand Rounds Louisville School of Medicine	November 7: Louisville, Kentucky	When Silence is Good: Application of the GIN Procedure
GSI Webinar	November 9	Introduction to Temporal Processing and its Application to CAPD and other Aspects of Neuroaudiology
Joint DOD & VA Audiology Conference	February 6-8: Anaheim, California	Adult Clinical Populations & CAPD
Speech & Hearing Association of Virginia	March 23-25: Richmond, Virginia	Part 1: Fundamentals of Pediatric CAPD, Part 2: An Overlooked Population: Adult CAPD
American Academy of Audiology; AudiologyNOW!	April 5-7: Indianapolis, Indiana	A 3-D Rotational Tour of the Vertebro-basilar System: It's Neuroanatomy and NeuroAudiology
Kaiser Permanente Audiology Symposium	May 14-15: Oakland, California	1) The vertebro-basilar system: It's importance to Audiology & NeuroAudiology 2) Frank Musiek's Chosen Case Studies in NeuroAudiology
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

Past Neuroaudiology Newsletters

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

Recent Article of Interest

Anatomical locus of the Angular Gyrus: Preliminary findings; *Journal of Hearing Science*
A. Everett, B. St. George, N. Denny, & F. Musiek

Recent Article of Interest

Mechanisms linking circadian clocks, sleep, and neurodegeneration; *Science*
E. Musiek & D. M. Holtzman

5 *Hearing Health and Technology Matters: Pathways Articles*

Some have not been aware of the Pathways articles that appear monthly in Hearing Health and Technology Matters (HHTM) [<http://hearinghealthmatters.org/pathways/>]. These are short, educational articles that are of interest and are on topics that are not well known to the general audiology community. A list of these articles is provided below and all can be accessed via HHTM – Pathways section.

HHTM Pathways Article Title:	Date:	Authors:
The N400 Event Related Potential: An Overview	March 4, 2014	Dara Kelly
2nd Global Conference on CAPD: Another Big Success	April 23, 2014	Frank E. Musiek, PhD
In Desperation, I Gave Myself Therapy	May 4, 2014	Jack Katz, Ph.D.
Book review: Auditory Event-Related Potentials to Words: Implications for Audiologists by James Jerger, Jeffery Martin and Katherine Fitzharris	May 21, 2014	Frank E. Musiek, PhD
Hearing Loss in Stroke	June 4, 2014	Nehzat Koohi
Considerations of CNS Auditory Processing in Hearing Rehabilitation for Older Adults: Addressing Their Listening Environments and Those Who Speak for Them	July 2, 2014	Raymond H. Hull, PhD, FASHA, FAAA
The Auditory System: What's the Cerebellum got to do with it?	August 6, 2014	Hillary K. Siddons and Frank E. Musiek
Bilateral vestibular hypofunction: An interesting problem	September 3, 2014	Stephanie A. Waryasz
Maximizing Auditory Training Effectiveness – A Clinical Perspective	October 1, 2014	Carol A. Lau
Comparison of Staggered Spondaic Words and Competing Words Test Results in ADHD: A Case Study	November 5, 2014	Vishakha Rawool
“Undercut” Lesions in the Auditory Areas of the Cerebrum	December 3, 2014	Frank E. Musiek, Ph.D.
Unmasking Auditory Temporal Masking	January 7, 2015	Renata Filippini, Ph.D.
Auditory impacts of Blast Exposure	February 6, 2015	Melissa A. Papesch and Frederick J. Gallun
Revisiting the Journal of Auditory Research (JAR)	March 4, 2015	Jeff Weihing and Frank E. Musiek
Geschwind and Levitsky Revisited	April 1, 2015	Frank E. Musiek, Ph.D.
Cryoloop Cooling: A Research Advance with Clinical Implications	May 6, 2015	Barrett St. George, Diane Cheek, Alyssa Everett and Frank E. Musiek, PhD
Speech in Noise Deficits in Children with Attention Deficit Hyperactivity Disorder	June 3, 2015	Donna Geffner, Ph.D.

6 *Hearing Health and Technology Matters: Pathways Articles Cont...*

HHTM Pathways Article Title:	Date:	Authors:
Thoughts on Hearing and Cognition	July 9, 2015	Vasiliki (Vivian) Iliadou
Auditory Evoked Potentials in Autism	August 5, 2015	Hillary Siddons
Alzheimer's Disease and CAPD: George Gates' Contributions	September 2, 2015	Giau N. Le and Frank E. Musiek, Ph.D
Some Random Thoughts on Frequency (Pitch) and Duration Patterns	October 7, 2015	Frank E. Musiek, Ph.D.
Status of Central Auditory Processing Disorders in India	December 2, 2015	N. Shivashankar
Cochlear Dynorphins, Stress and Tinnitus	January 6, 2016	Tony L. Sahley
Commentary on "Effects of Low Pass Filtering on Ear Asymmetry in Dichotic Listening and Some Uncontrolled Error Sources" (Spreen and Boucher, 1970)	February 3, 2016	Frank E. Musiek and Jeff Weihing
Neuromorphological Abnormalities and Central Auditory Processing Disorders: An Overview	March 3, 2016	Chloe E. Robbins
Sound Localization in Split-brain Subjects	April 6, 2016	Renata Filippini, PhD
Assays of the Caudal Efferent Auditory System: Part I	May 4, 2016	Spencer B. Smith
Assays of the Caudal Efferent Auditory System: Part II	June 1, 2016	Spencer B. Smith
The Auditory Processing Questionnaire: Differential Screening for APD Overview	July 6, 2016	Brian O 'Hara
Loudness Recruitment: A Commentary	August 3, 2016	Frank E. Musiek, Ph.D.
Rationale for the Use of Sound Field Systems for Children with Central Auditory Nervous System Dysfunction: Part 1	September 7, 2016	Steve Bornstein, Ph.D.
Rationale for the Use of Sound Field Systems for Children with Central Auditory Nervous System Dysfunction: Part 2	October 5, 2016	Steve Bornstein, Ph.D.
Classrooms, noise and auditory processing disorders	November 2, 2016	Mridula Sharma
Capitalizing the Ability of the Auditory System to Process Stimuli without Active Attention	December 7, 2016	Vishakha W. Rawool
Binaural Improvement in Normal and Defective Ears in a Background of Other Voices: A Historical Article Review from the Archives	January 4, 2017	Nicole Denny, Alyssa Everett, and Frank Musiek
The Clinical Utility of P300 Evoked Responses in Post-Sport-Related Concussion Evaluation	February 1, 2017	Stephanie Waryasz

Audiology Trivia Answers

1) In normal hearers, the Pb Max for the words on the NU6 lists is reached at:

- a) 40 dB SL
- b) 25 dB SL
- c) 32 dB SL**
- d) 36 dB SL

2) The 1st edition of "Audiological Assessment" was published in 1971.

Who was the editor of this book?

- a) Raymond Carhart
- b) Wayne Olsen
- c) Darrell Rose**
- d) Chuck Berlin

Check out the next newsletter for more audiology trivia!