Neuroaudiology Newsletter

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Upcoming CAPD Conference at the University of Arizona 11/20

Gail D. Chermak, PhD, (pictured left) is an internationally recognized authority on **central auditory processing disorder**. She is currently an audiology professor and chair of the Department of Speech and Hearing Sciences at Washington State University. Dr. Chermak received the Book of the Year Award for the **Handbook of (Central) Auditory Processing Disorders** Vols. 1 and 2 with **Dr. Frank Musiek** as coeditor. Between 1986 and 1990, funded by the Kellogg Foundation, the World Institute on Disability, and the Fulbright American Republics Research Program, Chermak traveled extensively across Europe, Central, and South America, and the Caribbean consulting with public and private agencies in the area of rehabilitation service delivery. Gail chaired the **2005 ASHA Work Group on CAPD**. She served on the **2010 AAA Task Force** publishing evidence-based clinical practice guidelines for **CAPD.** In 2012, and 2014, Gail served as the program chair for the first and second global conferences on **CAPD** in conjunction with the AAA conventions. For the **2016 Auditory Research Conference**, Gail will serve on the program committee. In addition, Gail has authored over 100 articles and book chapters, and 6 books. Dr. Chermak will be joining us at The University of Arizona on November 20, 2015 from 8am to 5pm for a Speech, Language, and Hearing Sciences **Audiology Workshop**. **Frank Musiek** along with Gail Chermak will be presenting on "**CAPD Diagnosis and Intervention: Practical Perspectives for Clinicians**." Anyone interested in attending this conference should contact Cathy Fay, cfay@email.arizona.edu , before November 12th.

International Guest Lecturer

Dr. Eliane Schochat (pictured right), is the coordinator of the **Central Auditory Processing Lab** from the **University of Sao Paulo, Brazil.** She is a professor from the Speech, Language, and Hearing Sciences department at

Sao Paulo since 1989 and supervised around 30 Masters, PhDs, and post-doctoral researchers. Dr. Schochat's Lab focuses on behavioral and electrophysiological studies of auditory processing, and how it is related to typical and impaired development and aging. Eliane is one of the best known audiologists in Brazil, a founder of the **Brazilian Academy of Audiology**, and is the editor of the Audiology journal. In addition, she has authored more than a hundred articles, books, and chapters on the topic of communication research. She will be joining us at **The University of Arizona** from November 3rd through November 12th. During her time, she will be giving a presentation available to all faculty, staff, and students discussing current and future research in **CAPD** in collaboration with **Dr. Frank Musiek** and Renata Filippini**.**

Teaching with Innovation

Andrew DeMarco (pictured right), a member of The University of Arizona's Aphasia lab directed by Dr. Beeson and a part of the **Neuroaudiology Research Lab**, holds a Master's degree in Speech-Language Pathology from Temple University with an ASHA-certified Certificate of Clinical Competence. Currently, he is completing his PhD as a Kirschestein-NRSA Pre-Doctoral Fellow in the Aphasia Research Project at The University of Arizona. His dissertation focuses on understanding the neural correlates of treatment-induced recovery of aphasia using function MRI. For many people, the mention of audiology provokes thoughts of the ear. However, a significant portion of the hearing system involves the brain and brainstem. Because the **central auditory nervous system** is not immune to pathology, it is important for both clinical audiologists and researchers to understand hearing function in the brain. Cadaver brain dissection has been used to teach **neuroaudiology**, but has practical limitations: difficult to acquire, deterioration with repeated use, and they cannot be handled by every student in a class. In addition, plastic models are typically over-simplified, not highlighting all anatomical features, and expensive. A potential solution to this teaching dilemma is through the emerging technology of 3-D printing. The University of Arizona recently acquired two MakerBot 2 printers to utilize this technology. **Dr. Frank Musiek** and Andrew have been working with these 3-D printers to generate high-quality brain models for the teaching purposes of **neuroaudiology.** This project is still ongoing due to the complexity of the anatomy and printing process, but is moving forward with promise of teaching neuroanatomy in the 3rd dimension.

CAPD Developing Research:

Jeff Weihing, PhD., (pictured left), is an instructor of audiology at the University of Louisville, Kentucky. He was one of **Dr. Musiek's** doctoral students. Jeff has 8 peer-reviewed publications, one of which involves the effects of presentation level on **Gaps in Noise (GIN), a central auditory processing test**. In addition, he is interested in research in hearing in noise and developing treatments for those with **auditory processing disorders**. Currently, Jeff is working on dichotic listening, a strategy used for testing **CAPD.** He is developing a mobile medical application for testing the dichotic listening skill for those of all ages with **CAPD.** This is an application that is targeted towards anyone providing audiology services, and anyone who is testing for **central auditory processing disorders** (clinics, hospitals, private practice, teaching centers, etc.) For this application, he is working in collaboration with Gay Masters, a speech language pathologist who developed the stimuli for the testing. This application is in progress and is expected to be released in 2016 or 2017. Jeff came to the U of A to meet with **Dr. Musiek** and present his current work to the RARA.

Jeff is also working with children with autism at the University of Louisville. For this work, he is analyzing how well they do in auditory localization measures, the Rhyme test, and dichotic listening. These measures are used as an attempt to minimize attention effects that could contribute to **CAPD** testing results.

FACT CHECK!-Did you know?....

Max Goldstein was the founding director of the Central Institute for the Deaf in St. Louis, MO in 1914. His methods for reducing the negative effects of a hearing loss included **auditory training!**

Recent Book Publication

Celesia, G., & Hickok, G. (Eds.). (2015). *Handbook of Clinical Neurology* (3rd ed., Vol. 129). Elsevier B.V.

Celesia and Hikok discusses The Human Auditory System: Fundamental Organization and Clinical Disorders. This new book really brings together a holistic heavy coverage on basic neuroscience and the applications of clinical research. The extensive contents covers Anatomy and Physiology of the Human Auditory Sytem, Methodology and Techniques, and Disorders of the Auditory System. Full contents can be viewed at elsevier.com: https://www.elsevier.com/books/the-human-auditory-system/celesia/978-0-444-62630-1.

This is an important book for the field of audiology due to its basic science information and it's direct ties to real-world application. Although steep in price, this book is well worth expense due to the information inside.

Past Neuroaudiology Newsletters/Other Important Neuroaudiology Sites

- *March 2015 Newsletter: http://slhs.arizona.edu/wp-content/uploads/2015/03/Neuroaudiology-Newsletter.pdf*
- *May 2015 Newsletter: http://slhs.arizona.edu/wp-content/uploads/2015/04/MayNewsletter3.pdf*
- *July 2015 Newsletter: http://slhs.arizona.edu/wp-content/uploads/2015/07/JulyNewsletter.pdf*
- *September 2015 Newsletter: http://slhs.arizona.edu/wp-content/uploads/2015/08/September-Newsletter.pdf*
- *http://musiek.faculty.arizona.edu/*
- *For weekly updates on new neuroaudiology articles refer to the Neuroaudiology section of Pathways on HHTM: http://hearinghealthmatters.org/pathways/*