

One positive outcome of the high number of military personnel returning from active duty with hearing loss and tinnitus has been the recent surge of national attention to these conditions. However, it is important to note that the scientific community has been working diligently for many years to identify the biological markers of tinnitus, determine how tinnitus affects quality of life, and develop potential cures. As part of this ongoing effort, from August 19-21, 2011, the Center for Hearing and Deafness at the University at Buffalo (UB) hosted the Fifth International Tinnitus Research Initiative (TRI) conference.

## Fifth International TRI Conference: Perspectives and Reflections

BY BRIAN ALLMAN, PH.D., (PICTURED LEFT), AND EDWARD LOBARINAS, PH.D., (PICTURED RIGHT), CENTER FOR HEARING AND DEAFNESS, UNIVERSITY AT BUFFALO



Organizing a successful international conference can be an incredibly rewarding experience; however, the planning and implementation of such a meeting represents an enormous undertaking. Our organizing committee, which consisted of Richard Salvi, Ph.D., Edward Lobarinas, Ph.D., Brian Allman, Ph.D., and Ms. Carol Altman, focused on recruiting the most prominent clinical and scientific experts on tinnitus from around the world. To maximize the attendees' time, we decided to run parallel sessions during the conference, with one session devoted to the neuroscience of tinnitus, and the other focused on clinical management. We also expanded the number of poster presentations at the meeting in an effort to include as many discussions on advances in tinnitus research as possible.

### Probing Deeper Into the Brain

The conference opened with a full group talk by Fan-Gang Zeng, Ph.D., on "Sound Diagnosis and Sound Therapy for Tinnitus." This outstanding presentation was followed by a provocative lecture by ATA Board member Carol Bauer, M.D., highlighting new discoveries on the "Cerebellum as a Novel Tinnitus Modulator." The next morning, the parallel conference sessions were launched following a talk from Kurt Yankaskas from the Office of Naval Research, who described the extreme levels of impact and

impulse noise encountered by U.S. Navy personnel, resulting in enormous disability costs to the Department of Veterans Affairs for noise-induced tinnitus and hearing loss.

The neuroscience focused lectures showed that major advances in neuroimaging have begun to reveal the complex neural network involved with tinnitus. Other studies revealed that complex interactions exist between auditory centers in the brain and non-auditory centers such as the amygdala, prefrontal cortex and hippocampus, which are areas that are believed to play a part in the emotional and psychological aspects of tinnitus. These results were supplemented by presentations and posters demonstrating the roles environmental noise and stress can play in tinnitus generation, and others on susceptibility and long term maintenance of tinnitus and hyperacusis.

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Several clinical and basic science presentations described the efficacy of treating tinnitus and hyperacusis with a variety of approaches ranging from electrical stimulation to new drug therapies, and customized sound therapies to counseling. The clinical talks received considerable attention and several of these presentations were standing room only!



Organizers, presenters and attendees from the Fifth International Tinnitus Research Initiative conference. Photo courtesy of Michael Chrostowski from McMaster University.

## We're All in This Together

Following an intense two days of sharing ideas, highlighting new discoveries, and discussing novel clinical approaches, the conference ended with a gala banquet. During the banquet there was also an awards ceremony to recognize the important contributions that individuals and organizations have made in supporting tinnitus research. Richard Salvi, Ph.D., representing the Center for Hearing and Deafness, presented the following awards:

- **Leadership Award** - Berthold Langguth, M.D., Ph.D., and the Tinnitus Research Initiative for their efforts in funding research worldwide and for promoting the TRI tinnitus conferences.
- **Advocacy Award** - Jennifer Born and the American Tinnitus Association for their stellar efforts to promote awareness and research funding for tinnitus at the national level through the Department of Defense, National Institutes of Health, and other organizations.
- **Commitment Award** - James B. Snow Jr., M.D., and the Tinnitus Research Consortium for their dedication and long-term efforts to fund basic and clinical research related to tinnitus.

The conference was a tremendous success that generated so much interest that we were forced to limit the number of attendees because we simply could not accommodate all who wanted to attend. The quality and scope of the neuroscience and clinical presentations pleasantly exceeded our expectations, with outstanding talks and posters on new research and clinical strategies. People with tinnitus can rest assured that scientists and clinicians are hard at work to bring the promises of tomorrow's treatments closer than ever before. ☺☺☺

*This conference received generous support from the Office of Naval Research, the American Tinnitus Association, the Department of Communicative Disorders and Sciences and School of Medicine and Biological Sciences at the University at Buffalo, Auris Medical, General Hearing Instruments, Med-El Corporation, Merz Pharmaceuticals, Sound Pillow, Tucker-Davis Technologies, and Widex.*

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